

EXHIBIT B

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION

SONOS, INC.,
Plaintiff,
vs.
GOOGLE, LLC,
Defendant.

)
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)
) Civil Action No.
) 6:20-cv-00881-ADA
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Videoconference deposition of DOUGLAS CRAIG
SCHMIDT, Volume I, taken on behalf of Plaintiff,
beginning at 11:08 a.m. and ending at 4:08 p.m. on
Friday, June 25, 2021, before KATHLEEN E. BARNEY,
Certified Shorthand Reporter No. 5698.

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1 Friday, June 25, 2021

2 11:08 a.m.

3
4 THE VIDEOGRAPHER: Good morning. We are on
5 the record at 11:08 a.m. on June 25th, 2021. All 09:08:42
6 participants are attending remotely. Audio and
7 video recording will continue to take place unless
8 all parties agree to go off the record.

9 This is Media Unit 1 of the recorded
10 deposition of Douglas Schmidt taken by counsel for 09:09:02
11 the defendants in the matter of Sonos, Inc., versus
12 Google, LLC, filed in the United States District
13 Court, Western District of Texas, Waco Division,
14 case number 6:20-CV-881.

15 My name is Kimberlee Decker from Veritext 09:09:21
16 Legal Solutions. I'm the videographer. The court
17 reporter is Kathy Barney. I'm not related to any
18 party in this action, nor am I financially
19 interested in the outcome.

20 Counsel and all present will now state their 09:09:34
21 appearances and affiliations for the record. If
22 there is any objection to proceeding, please state
23 so at the time of your appearance, beginning with
24 the noticing attorney.

25 MR. JAFFE: Good morning. Jordan Jaffe of 09:09:44

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1 Quinn Emanuel on behalf of Google. With me today
2 are also some summer associates, Andrea Deleon,
3 Duncan Hall, and Jacqueline Wu.

4 MR. SULLIVAN: This is Sean Sullivan from Lee
5 Sullivan Shea & Smith LLP on behalf of Sonos. 09:10:02

6 THE VIDEOGRAPHER: Thank you.

7 Would the court reporter please swear in the
8 witness.

9
10 DOUGLAS CRAIG SCHMIDT,
11 having been administered an oath, was examined and
12 testified as follows:

13
14 EXAMINATION

15 BY MR. JAFFE:

16 Q Good morning. As you just heard, my name is
17 Jordan Jaffe. Can you please state your name for
18 the record.

19 A Douglas Craig Schmidt.

20 Q Do you have a doctorate? 09:10:37

21 A I do.

22 Q Would you prefer that I refer to you as
23 Dr. Schmidt or what would -- what is your preferred
24 title?

25 A Dr. Schmidt is fine. 09:10:49

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1 Q Okay, great.

2 Have you ever been deposed before,

3 Dr. Schmidt?

4 A I have.

5 Q Okay. How many times? 09:10:55

6 A Probably 12 to 15, something like that.

7 Q All right. So is it fair to say you

8 understand the deposition process?

9 A That's correct.

10 Q Okay. And have you been deposed virtually 09:11:07

11 before?

12 A I have.

13 Q Okay. All right. Well, I'm not going to go

14 over the ground rules, then, because you're an

15 experienced deponent here. Is that all right with 09:11:19

16 you?

17 A That's fine.

18 Q Do you understand that you are under oath?

19 A I do.

20 Q And you understand that even though we're not 09:11:26

21 sitting in a courtroom, whether live or virtual,

22 that you need to testify with the same seriousness

23 as if you were?

24 A Yes.

25 Q All right. I'm just going to ask you a 09:11:38

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1 couple quick questions, given that we're remote.

2 Is anyone in the room with you right now?

3 A No.

4 Q What documents and materials do you have in
5 front of you? 09:12:03

6 A I have my computer and I have printouts of
7 the patents.

8 Q Do you have any devices in front of you other
9 than the computer that we're using to speak right
10 now? 09:12:17

11 A No.

12 Q Do you have any chat features open on your
13 computer?

14 A No.

15 Q Do you understand that you're not to 09:12:26
16 communicate with others outside of the Zoom during
17 the deposition?

18 A Yes, I do.

19 Q And will you not do that throughout the
20 course of the deposition today? 09:12:35

21 A Yes, I will not do that.

22 Q Great.

23 Now, before we got on the record, I premarked
24 a few exhibits, which I will now introduce. I
25 marked as Exhibit 1, which is your first 09:12:54

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1 declaration, which is Document No. 60-24.

2 (Exhibit 1 was marked for identification
3 electronically and is attached hereto.)

4 MR. JAFFE: I marked as Exhibit 2 your
5 declaration submitted with the reply. 09:13:08

6 (Exhibit 2 was marked for identification
7 electronically and is attached hereto.)

8 MR. JAFFE: I marked as Exhibit 3 the '615
9 patent.

10 (Exhibit 3 was marked for identification
11 electronically and is attached hereto.)

12 MR. JAFFE: And I marked as Exhibit 4 the
13 '033 patent.

14 (Exhibit 4 was marked for identification
15 electronically and is attached hereto.) 09:13:19

16 BY MR. JAFFE:

17 Q Dr. Schmidt, do you see all those exhibits in
18 your Exhibit Share folder?

19 A Yes, I do.

20 Q And could you verify that what I've marked as 09:13:24
21 Exhibits 1 and 2 are the declarations -- are the
22 only declarations that you submitted in this matter?

23 A That appears to be the case, yes.

24 Q Are there any inaccuracies, corrections,
25 typos that you want to correct in your declaration? 09:13:41

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1 A Nothing comes to the top of my mind.

2 Q As far as you can recall, sitting here today,
3 the two declarations that we've marked as Exhibits 1
4 and 2 are true and accurate?

5 A That's correct. 09:14:00

6 Q Okay. What was the process you went through
7 in drafting -- let's start with the first
8 declaration, Exhibit 1.

9 A For Declaration 1, I worked together with
10 counsel, had conversations trading information back 09:14:26
11 and forth, looking through the various terms that
12 were being -- that I had been asked to opine on with
13 respect to the proper construction.

14 Conducting independent analysis to ensure
15 that the terms, constructions were consistent with 09:14:48
16 my understanding of the state of the art, state of
17 the practice in the time of the invention.

18 Understanding, based on reading the material,
19 what I believed to be the appropriate statement of a
20 person who is skilled in the art at the time of the 09:15:12
21 invention.

22 Reading the patents, understanding what they
23 were about, characterizing that in one of the
24 sections that gives an overview of the patents.

25 Talking to counsel to understand various 09:15:27

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1 legal standards that applied in the context of claim
2 construction.

3 And then working through both intrinsic and
4 extrinsic evidence to support my opinions regarding
5 the construction and the terms at issue, which of 09:15:45
6 course are data network, local area network, and
7 then in the case of my opening declaration, media
8 particular playback system.

9 Q You mentioned you read the patents. What
10 patents did you read? 09:16:06

11 A The '615 and the '033 patents.

12 And I also took a look at other material that
13 was referenced.

14 Q Did you read the entirety of the '615 and
15 '033 patents or just some parts? 09:16:24

16 A The entirety.

17 Q And did you consider and factor in the
18 entirety of the disclosures of the '615 and '033
19 patents in forming your claim construction opinions?

20 A Yes, I did. 09:16:36

21 Q How long did you spend analyzing the '615 and
22 '033 patents in forming your opinions on claim
23 construction?

24 A I don't have an exact breakdown of the number
25 of hours for that. But it probably would have been 09:16:50

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1 on the order of 10 to 20 hours.

2 Q And is that for your opening declaration or
3 both declarations collectively?

4 A I didn't keep track of that. Obviously, as I
5 did the declarations, I would go back and review the 09:17:13
6 patents at issue and use them as the basis of my
7 opinions, getting the appropriate citations and
8 references from there. So I don't have a specific
9 breakdown for the opening declaration versus the
10 reply declaration. 09:17:32

11 Q Understood. My question was a little bit
12 different, which was the number you mentioned, 10 to
13 20 hours reviewing the patents, was that 10 to 20
14 hours, did that refer to the work that you did for
15 your opening declaration or was that just 09:17:45
16 collectively the amount of time you spent analyzing
17 the patents in the case thus far?

18 A Like I said, I don't remember the exact
19 amount for each of the patents -- I'm sorry, for
20 each of the declarations. 09:18:00

21 Q Okay. Approximately how much time did you
22 spend preparing your opening declaration?

23 A Again, I don't really have that off the top
24 of my head.

25 Q Can you ballpark it? Like 50 hours? 100 09:18:16

1 hours?

2 A Probably -- again, I don't really have -- 30
3 to 50, something like that.

4 Q How much time did you spend preparing the
5 second declaration, which I've marked as Exhibit 2? 09:18:37

6 A Again, I don't really recall off the top of
7 my head. Probably maybe 20 hours, something like
8 that. I'm not sure. I don't really recall.

9 Q Is the process that you went through for your
10 second declaration substantially similar to the 09:18:56
11 process that you described for your opening
12 declaration?

13 A Yes. With the addition that I also sat in on
14 Dr. K's deposition and read the transcript of his
15 deposition. And also, of course, read his 09:19:17
16 declaration.

17 Q Did you review the prosecution history for
18 the '615 and '033 patents?

19 A Yes.

20 Q And there are some exhibits to your opening 09:19:36
21 declaration, correct?

22 A That's correct, yes.

23 Q Who selected those exhibits?

24 A Depends on which exhibit we're referencing
25 here. So, for example, I think -- let me see if I 09:20:05

1 can find it.

2 I assume by exhibit you mean the appendices?

3 Q Yes. Thank you for clarifying.

4 A So Appendix A was something that I provided.

5 That's my CV. Appendix B is a description of data 09:20:42
6 network which I had identified together with
7 counsel.

8 There's a number of different dictionary
9 definitions that are provided in the appendices, as
10 well as a textbook, a popular textbook on local and 09:21:11
11 metropolitan area networks by a well-known author
12 named William Stallings, which was from the 2000
13 time frame, and which I had used before, so I was
14 familiar with the material there. So that is
15 something that we selected together. 09:21:32

16 Let's see. Another book by, actually, a
17 colleague who I've worked with for many years, Doug
18 Comer. I think that's Appendix E. Telecom
19 dictionary.

20 So these were things that either I was 09:22:10
21 familiar with based on my work in the field over the
22 years, or counsel brought to my attention, which I
23 then read to understand how the definitions
24 corresponded with my understanding as a person of
25 ordinary skill in the art would have understood it 09:22:25

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1 during that time.

2 There is another -- I think Appendix H is
3 another book by William Stallings that I've used
4 before in my work, which is from the -- again,
5 roughly, the 2000 time frame. 09:22:38

6 Q Okay. We can go into this individually in
7 more detail, but generally your declaration and --
8 your opening declaration, Exhibit 1, includes
9 various cites to the specifications of the '615 and
10 '033 patent, correct? 09:23:02

11 A Among other things, yes.

12 Q How did you select those specific citations
13 as opposed to citing to different parts of the
14 specification?

15 A Well, it would depend, of course, on what the 09:23:17
16 topic was that was being discussed. If it was
17 looking for places where there was a discussion of
18 networks, different types of networks, LANs versus
19 WANs, for example, then that was a matter of looking
20 to see where -- where in the specification those 09:23:42
21 terms appeared and the context in which they
22 appeared.

23 So, for example, paragraph 94 of my opening
24 declaration, I refer to the '615 patent spec where
25 it talks about a local area network being a small 09:24:01

1 network. And so I was using that in order to help
2 describe the context that I used where a local area
3 network has a limited scope or limited area.

4 So I guess the answer to your question, more
5 succinctly, depending on which terms were being -- 09:24:26
6 which term was being or which phrase was being
7 construed, looking in the specification to
8 understand where there was evidence that would
9 support that particular construction.

10 Q Thank you. 09:24:43

11 In reviewing the '615 and '033 patents, did
12 you understand them?

13 A Yes.

14 Q Was there anything that you read in the
15 patents that you didn't understand? 09:25:05

16 A That's a good question. I'd have to go back
17 and look specifically at the patents to see if there
18 was something I didn't understand. I don't recall,
19 sitting here today, whether I -- I thought I
20 understood everything I was reading, but there might 09:25:30
21 have been something that I didn't. But I don't
22 recall.

23 Q Fair enough.

24 Let me ask my question a little bit more
25 succinctly myself. 09:25:41

1 Sitting here today, is there anything that
2 you recall in the '615 or '033 patents that you
3 didn't understand?

4 A Not that I recall.

5 Q Did you review the claims of the '615 and 09:26:06
6 '033 patents?

7 A I did.

8 Q Did you understand those as well?

9 A Yes.

10 Q Was there anything in the claims of the '615 09:26:14
11 and '033 patents that you did not understand?

12 A Not that I recall.

13 Q What is the invention of the '615 patent?

14 MR. SULLIVAN: Just let me lodge an objection
15 here to the extent it calls for a legal conclusion. 09:26:36

16 THE WITNESS: So my understanding of the
17 invention of the '615 patent or the '033 patent or
18 really any patent, I suppose, is that the invention
19 is what is disclosed in the claims.

20 BY MR. JAFFE: 09:26:58

21 Q Could you provide me, in your own words, a
22 description of the invention of the '615 patent?

23 MR. SULLIVAN: Same objection.

24 THE WITNESS: So, again, the invention is
25 really what is disclosed in the claims. I'm happy 09:27:11

1 to read the claims to you. There's a summary in my
2 opening declaration that gives an overview of the
3 '615 and '033 patents. I'm happy to go look at that
4 as well.

5 But it's my understanding that the scope of 09:27:28
6 the invention is what is in the claims that are then
7 allowed by the patent office.

8 BY MR. JAFFE:

9 Q Is it fair to say that you can't provide me a
10 description of the invention of the '615 patent 09:27:42
11 apart from reading me the claims?

12 MR. SULLIVAN: Objection. Calls for a legal
13 conclusion. And mischaracterizes his testimony.

14 THE WITNESS: As I was saying, it's my
15 understanding that the invention in the '615 or the 09:27:55
16 '033 patent or in any patent is what is provided in
17 the claims that were allowed. So I'm happy to read
18 the claims to you, but that's, in my mind, what the
19 invention -- the inventive elements of these patents
20 are what is characterized in the claims. 09:28:14

21 BY MR. JAFFE:

22 Q Okay. I'm going to have a similar set of
23 questions for the other patent addressed in your
24 declaration.

25 What is the invention of the '033 patent? 09:28:25

1 MR. SULLIVAN: I'll just say this. Same
2 objections if they're going to be the same
3 questions. I don't want to keep interrupting you,
4 Jordan, so I'll just note that for the record.

5 THE WITNESS: Again, it's my understanding 09:28:39
6 that the invention in the '033 patent, as with the
7 '615 patent, as with any patent, would be -- are
8 captured in the claims. I think there are 16 claims
9 in the '033 patent. That's my understanding is
10 where the invention is disclosed. 09:28:59

11 BY MR. JAFFE:

12 Q Can you explain in your own words the
13 invention of the '033 patent?

14 A Again, as I mentioned before, it's my
15 understanding that what's -- the inventive aspects 09:29:11
16 are what is captured in the claims. I'd be happy to
17 read the claims to you.

18 Q Is it fair to say that you can't provide a
19 description of the invention of the '033 patent
20 apart from reading me the claims? 09:29:26

21 A There's a description giving an overview of
22 the patents, the '615 and the '033 patents, in my
23 opening declaration. And I'm happy to go look at
24 that and read through those parts. But as I
25 mentioned before, the -- it's my understanding that 09:29:44

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1 the claims are where the inventive aspects are
2 disclosed.

3 Q I was a little bit confused by that answer.

4 Can you provide me a description of the
5 invention of the '033 patents apart from reading me 09:30:00
6 the claims?

7 A Yes. If you take a look at Section 6 in my
8 opening declaration, it gives my overview of what is
9 provided in the '615 and '033 patents, and it talks
10 through the different aspects of what the patents do 09:30:17
11 in my own words in my summary. So that's probably a
12 good place to look for the summary.

13 Q Okay. What paragraphs of your opening
14 declaration, which we've marked as Exhibit 1,
15 describe the invention of the '033 patent? 09:30:34

16 MR. SULLIVAN: I'll just make the same
17 objection that I -- it seems like a new question
18 from before. So I'll object to the extent it calls
19 for a legal conclusion to the extent you're asking
20 him to characterize what the invention is of the 09:30:46
21 patents.

22 THE WITNESS: So it's my understanding that
23 the inventive aspects of these patents or any patent
24 is captured in the claims. Section 6 in my opening
25 report, which starts at paragraph 30 and goes to the 09:31:03

1 end of paragraph 38, talks about an overview of the
2 patent, referencing back to different portions of
3 the patent specification.

4 But, again, in terms of the inventive
5 aspects, the claims would be broad enough to see the 09:31:23
6 inventive aspects of the patents.

7 BY MR. JAFFE:

8 Q Okay. So in terms of describing what the
9 invention of the '033 patent is, you can't provide a
10 description of that apart from pointing to the claim 09:31:38
11 language. Fair?

12 A Again, the sections in my report, opening
13 report from Section 6, paragraphs 30 to 38, give my
14 overview of what the patents are about. And then
15 the part that's the invention, if there's a -- 09:31:56
16 again, my understanding is that the invention is
17 what is actually described in the claims, which are
18 in the patent specifications themselves.

19 Q Okay, thank you. I just want to make sure
20 we're not talking past each other. 09:32:09

21 So can you just identify where in your
22 declaration the invention of the '033 patent is
23 described?

24 MR. SULLIVAN: I'll make the same objection
25 and add to it that this has already been asked and 09:32:20

1 answered.

2 THE WITNESS: So the claims in the '615 and
3 '033 patent are where the invention is disclosed.
4 In my declaration, there's an overview of the
5 patents in my words in Section 6, paragraphs 30 to 09:32:37
6 38, with references back into the specification in
7 the patent, an overview of what these -- part of
8 what the patent is about.

9 BY MR. JAFFE:

10 Q Thank you. 09:32:53

11 What is the difference between the invention
12 of the '033 patent and the '615 patent?

13 MR. SULLIVAN: Objection. Calls for a legal
14 conclusion.

15 THE WITNESS: Again, there are different 09:33:07
16 claims looking at different aspects of what is
17 disclosed in the column specification.

18 Again, we'd have to look at the claims and
19 put them side by side to see specifically how they
20 differ, but they're -- the claims are not the same. 09:33:20
21 The claims are claiming different things.

22 BY MR. JAFFE:

23 Q Other than differences in the claim language,
24 can you, sitting here today, tell me the difference
25 between the invention of the '033 patent and the 09:33:31

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1 '615 patent?

2 MR. SULLIVAN: Objection. Calls for a legal
3 conclusion. It's also outside of the scope of what
4 I believe is supposed to be a claim construction
5 deposition for this witness. 09:33:42

6 THE WITNESS: Again, the specific differences
7 between the inventive aspects of the '615 and the
8 '033 patents are characterized or captured in the
9 claims. We'd have to go through and do a very
10 thorough analysis of each claim comparing it to all 09:34:07
11 the other claims in the other patent. And I believe
12 that was beyond the scope of what I was doing in the
13 claim construction, in my claim construction
14 declarations.

15 BY MR. JAFFE: 09:34:24

16 Q Did you analyze the novelty of any patent in
17 arriving at your claim construction opinions?

18 MR. SULLIVAN: Objection. Calls for a legal
19 conclusion. Outside the scope of this deposition.

20 THE WITNESS: Let's take a quick look here 09:34:37
21 in -- so if you take a look at the opening
22 declaration, Section 1, it gives a summary of the
23 scope of my assignment.

24 And in paragraphs 1 and 2 it talks about how
25 my assignment was to provide opinions on how a 09:35:11

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1 person of ordinary skill in the art at the time of
2 the invention of these two patents would have --
3 would have understood the claim terms that are at
4 issue, data network, local area network, and
5 particular playback system. 09:35:28

6 And so as it then says in the following
7 paragraph, paragraph 2:

8 "This declaration explains my
9 analysis and opinions of the
10 above-identified claim terms." 09:35:37

11 So that was the scope of what I looked into
12 for this declaration.

13 BY MR. JAFFE:

14 Q Okay. So did you analyze the novelty of any
15 patent in arriving at your claim construction 09:35:48
16 opinions?

17 MR. SULLIVAN: Same objections.

18 THE WITNESS: Again, the scope of my
19 assignment is captured in the first two paragraphs,
20 or perhaps other places in the declaration as well. 09:35:59
21 But that's where a summary of the scope of my
22 assignment is.

23 So what I looked at in that context were the
24 claim terms as opposed to analyzing the patents for
25 other properties. 09:36:12

1 BY MR. JAFFE:

2 Q Thank you. And I understand your point.
3 There are paragraphs in your declaration. Do those
4 paragraphs -- let me start over. Is that all right?

5 A Yes. 09:36:23

6 Q I understand you're pointing at some
7 paragraphs in your declaration as defining the scope
8 of your assignment. Do those paragraphs, do they --
9 did you do any analysis outside of what is written
10 in those paragraphs for purposes of arriving at your 09:36:39
11 claim construction opinions?

12 A My focus for the opening declaration is
13 captured in the scope of the assignment.

14 Q I understand that's your focus. My question
15 was a little bit different. 09:36:50

16 Did you do any additional analysis in
17 arriving at your claim construction opinions apart
18 from what you just pointed to in the first two
19 paragraphs of your declaration?

20 A For the opening declaration, what's described 09:37:04
21 here was what I focused on.

22 Q You used that word "focused" again. I'm
23 trying to understand if you're making a distinction
24 here between focus and whether you did any other
25 work. 09:37:23

1 So let me just ask this question. Did you
2 analyze the novelty of any patent in arriving at
3 your claim construction opinions?

4 MR. SULLIVAN: Same objection. Asked and
5 answered. 09:37:35

6 THE WITNESS: So for the opening declaration,
7 what I did -- not just what I focused on, but what I
8 did is captured in the first two paragraphs. Other
9 things beyond that were things that I did not
10 intentionally do as part of this analysis. 09:37:56

11 BY MR. JAFFE:

12 Q For purposes of your rebuttal declaration,
13 did you analyze the novelty of any patent?

14 MR. SULLIVAN: Same objections.

15 THE WITNESS: Again, once again, paragraph 2 09:38:06
16 and 3 and 4 -- sorry. There is someone else in my
17 room. It's a dog. But he is not communicating with
18 me.

19 BY MR. JAFFE:

20 Q It sounds like he or she is communicating 09:38:31
21 with you.

22 A Actually, he is communicating with someone
23 who is walking by outside. But unfortunately, he is
24 communicating with us. I apologize. Let me let him
25 out. Sorry. 09:38:44

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1 This is the downside of doing a Zoom
2 declaration -- a Zoom deposition.

3 So to go back to your question --

4 Q Let me -- sorry to interrupt. Just for
5 purposes of the record, let me just ask the question 09:39:09
6 again and then you can answer. So I'll withdraw the
7 prior question. I'm just going to ask it again.

8 For purposes of your rebuttal declaration,
9 did you analyze the novelty of any patents?

10 MR. SULLIVAN: Same objections. 09:39:25

11 THE WITNESS: In my reply declaration,
12 paragraphs 2 through 4 give an overview of what I
13 did, what my scope was for the reply declaration.
14 And it did a few extra things beyond what I did in
15 my opening declaration because I had other things to 09:39:46
16 review, such as Dr. K and his deposition and so on.
17 But I didn't -- my focus, my activities, my analysis
18 were limited to what I disclose here.

19 BY MR. JAFFE:

20 Q Okay. Let's -- if you could go to Exhibit 2, 09:40:18
21 paragraph 20.

22 A I'm there.

23 Q Midway through the paragraph, you see there's
24 a statement. And I'm just going to read part of it.
25 It says:

1 "Forms of communication not
2 relevant to the inventions of the '615
3 and '033 patents."

4 And then it goes on from there.

5 Do you see that? 09:40:52

6 A I do.

7 Q Okay. So your -- is it fair to say that your
8 claim construction declarations discuss the
9 inventions of the '615 and '033 patents?

10 A I'm not quite sure what you mean by that. 09:41:08
11 I'm sorry. I don't understand what you're asking.

12 Q Sure. Absolutely.

13 Your declaration -- this is Exhibit 2,
14 paragraph 20, in your reply declaration, it states,
15 in part, that certain forms of communication are not 09:41:34
16 relevant to the inventions of the '615 and '033
17 patents. True?

18 MR. SULLIVAN: I think he's frozen.

19 THE WITNESS: Is this better?

20 BY MR. JAFFE: 09:42:19

21 Q I think your internet connection is not very
22 strong, so I don't know if there's any way for you
23 to improve that.

24 A Yeah. I just opened a door, which should let
25 the Wi-Fi signal through better. Am I moving and 09:42:34

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1 speaking legibly now?

2 Q Yes. And I don't think we got an answer to
3 your last question -- to my last question. So let
4 me ask it again.

5 Is that all right? 09:42:47

6 A Please.

7 Q In Exhibit 2, in paragraph 20 of your reply
8 declaration, it states, in part, that certain forms
9 of communication are not relevant to the inventions
10 of the '615 and '033 patents, right? 09:43:03

11 A That's what it says, yes.

12 Q What did you mean by the inventions of the
13 '615 and '033 patents, as stated here in paragraph
14 20 of your reply declaration?

15 A Going back to what we had discussed earlier 09:43:19
16 whereby the inventions of these patents or any
17 patents are covered by the claims, the claim
18 elements in both patents use certain terms. So the
19 claims, of course, are where the invention is
20 disclosed. 09:43:44

21 And, in particular, the claim terms that are
22 at issue here, the specific claim term at issue in
23 this particular discussion is the claim term "data
24 network," which appears throughout the claims.

25 And so the particular discussion here has to 09:44:01

1 do with the use by Dr. K of a very broad
2 understanding of a data network, which from what I
3 can tell is basically, in his view, a data network
4 is essentially any network. And what I was saying
5 was the way that the term "data network" is used in 09:44:30
6 the claims, which are where the inventions are
7 disclosed in the patents, don't relate to the other
8 examples of networks that appear at the end of the
9 sentence you had read a portion of, including
10 traditional analog radio broadcast and individuals 09:44:46
11 talking via two cups attached by a string.

12 So I'm referring here to those -- the claim
13 elements' use of the phrase "data network," which of
14 course is in the claims, which are part of what are
15 disclosing the invention or inventions. 09:45:09

16 Q What did you do to prepare for today's
17 deposition?

18 A I read through the declarations, my
19 declarations. I read through various deposition
20 transcripts. I read through the patents. I talked 09:45:27
21 with counsel, my counsel. And also just in general
22 thought about the issues to make sure I had a good
23 grasp holistically of what we're going to be talking
24 about.

25 Q Did you speak with anyone other than counsel 09:45:53

1 in preparation for your deposition today?

2 A No.

3 Q Did you speak with anyone other than counsel
4 in preparing either of your two claim construction
5 declarations?

09:46:02

6 A No.

7 Q Were you aware of the '615 and '033 patents
8 before you were engaged for this case?

9 A No.

10 Q When were you engaged for this case?

09:46:24

11 A In early April of 2021.

12 Q How many times have you worked for -- well,
13 let me ask that a different way. Let me start over.

14 Is that all right?

15 A Sure.

09:46:46

16 Q How many cases have you worked on for Sonos?

17 A None before this one. Let me rephrase that.

18 One earlier case with -- I believe the roles
19 were reversed, where Sonos is the defendant.

20 Q So two cases, this one and the one where
21 Sonos was a defendant; is that right?

09:47:15

22 A That's correct.

23 Q Okay. Now, when referring to the '615 and
24 '033 patents thus far in today's deposition, are you
25 aware that there are three other patents asserted in

09:47:34

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1 this lawsuit?

2 A I'm aware that there are other patents
3 asserted in the lawsuit. I haven't -- I haven't
4 read them. I wouldn't know which ones they were.

5 Q Okay. That was -- you pre-empted my next 09:47:51
6 question. Have you read the other patents that are
7 asserted in this case?

8 A No.

9 Q What would you describe as the field of the
10 '033 and '615 patents? 09:48:16

11 A When you say "field," you mean the --
12 basically -- I just wanted to make sure I understood
13 what is meant by "field."

14 Q Sure. Let me ask -- I'll ask it a different
15 way. 09:48:43

16 What do you understand to be the field of the
17 invention of the '033 and '615 patents?

18 A I would say it would be -- hold on one
19 second. Let me look at something real quick.

20 Q Where are you looking? What are you looking 09:49:06
21 at? Apologies for interrupting. I just want to
22 know what you're looking at. Since we're virtual, I
23 can't see what you're looking at as I would be able
24 to in a regular deposition.

25 A Sure. I was just trying to make sure I 09:49:26

1 understood what was meant by "field" in this
2 context.

3 And so in looking at the -- it's answered
4 very clearly by the patents themselves where they
5 talk about the field of disclosure, which is 09:49:41
6 consumer electronics generally, and then more
7 particularly providing music for playback by one or
8 more devices on a playback data network. I just
9 wanted to make sure I had the precise field. The
10 word "field" can be different definite things. 09:49:57

11 In my world, "field" could be computer
12 science or electrical engineering. I just wanted to
13 make sure I was using the word "field" in the right
14 context.

15 Q Thank you. 09:50:10

16 What do you understand to be the field of the
17 invention of the '033 and '615 patents?

18 MR. SULLIVAN: Objection. Asked and
19 answered.

20 THE WITNESS: Well, I think the patent -- the 09:50:20
21 patents clearly articulate what the inventors
22 understood the field of the disclosure to be, which
23 would be the field of consumer electronics in
24 general and then more specifically the field of
25 providing music for playback by one or more playback 09:50:38

1 devices on a playback data network.

2 BY MR. JAFFE:

3 Q Do you agree with the description in the
4 patent?

5 A I have no reason to disagree with it. Seems 09:50:50
6 like a succinct summary of what the field is in the
7 context of what is being disclosed.

8 Q Do you consider yourself an expert in that
9 field as of 2011?

10 A Over the past 30 years or so, I have 09:51:10
11 developed software that has been used for a variety
12 of purposes, including multimedia audio-video
13 streaming, both directly in terms of services for
14 those technologies and publications from the --
15 starting in the mid to late '90s and went on for a 09:51:36
16 number of years related to playing back music and/or
17 video by devices in a data network.

18 So, yes, I believe so. I have publications
19 on those topics.

20 Q You mentioned the word "multimedia." What 09:51:56
21 did you mean by that?

22 A Well, first, let's take a quick look.

23 My understanding of multimedia, which I
24 believe is consistent with the -- what is in the
25 patent as well, is basically audio, video, and/or 09:52:13

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1 audiovisual output. So it could be audio by itself,
2 it could be video by itself, it could be audio-video
3 combined. Those are all examples of what people
4 talk about in the art as being multimedia.

5 Q When you say "video by itself," you mean 09:52:37
6 moving pictures without any sound; is that right?

7 A Right.

8 Q Okay. So multimedia can mean video without
9 any sound?

10 A There's no reason to -- sure. You could have 09:52:51
11 video by itself, you can have audio by itself, you
12 can have audio-video where it is combined. Those
13 are all examples of what a person of ordinary skill
14 in the art would think about as being multimedia.

15 Q Okay. Did you have any experience with 09:53:11
16 multi-room audio in 2011, or by 2011?

17 A I've worked in environments that had those
18 capabilities.

19 Q What environments did you work in that had
20 multi-room audio capabilities by 2011? 09:53:34

21 A I don't really recall off the top of my head.

22 Q Did you have any experience with shared
23 playlists by 2011?

24 MR. SULLIVAN: Objection to the extent it
25 calls for a legal conclusion since it's using a term 09:54:15

1 in the patents.

2 THE WITNESS: I don't recall.

3 BY MR. JAFFE:

4 Q Did you have any experience with networked
5 media systems by 2011? 09:54:39

6 A Yes.

7 Q What experiences with networked media systems
8 did you have by 2011?

9 A As I mentioned earlier, I had published
10 articles going back to the mid to late '90s on 09:54:55
11 developing software and software services that could
12 be used to play multimedia content through a
13 computer data network. And so those were
14 experiences that I had in that context.

15 Q Are you referring to multiple systems or are 09:55:17
16 you thinking of one system in particular?

17 A I'm not sure what you mean.

18 Q Well, you testified that you published
19 articles going back to the mid to late '90s on
20 developing software and software services that could 09:55:36
21 be used to play multimedia content through a
22 computer data network.

23 My question is, are you referring to multiple
24 systems or a particular system in what you were
25 discussing? 09:55:51

1 A So starting in -- again, in the mid to late
2 '90s and continuing on for several years, I've been
3 involved in a project that was developing an
4 audio-video streaming service that worked in the
5 context of an international middleware standard 09:56:13
6 known as the Common Object Request Broker
7 Architecture.

8	Q	CORBA?
---	---	--------

9	A CORBA, yeah, often known as CORBA. That's	
10	right.	09:56:33

11 And so I developed a -- myself and my team of
12 colleagues developed implementations of the CORBA
13 audio-video streaming service, again, starting in
14 the mid to late '90s to the 2000s. And that service
15 was capable of being able to stream audio-video 09:56:52
16 and/or audio-video content from content providers to
17 devices across a data network.

18 Q Other than your work with CORBA, did you have
19 any other experience with networked media systems by
20 2011? 09:57:19

21	A Yes.
----	--------

22 Q What other experience did you have with
23 networked media systems before 2011?

24	A I had been working with Android and using	
25	Android in order to develop applications that could	09:57:33

1 stream audio-video content from media servers,
2 multimedia servers in that time frame.

3 Q What was the name of the -- that Android
4 project you just mentioned?

5 A These were either things I was doing on my 09:57:51
6 own just to learn the technology or they were things
7 I was doing for classes that I was teaching and/or
8 they were things I was doing -- mostly things I was
9 doing to learn about using Android to access various
10 types of content, audio-video content being one type 09:58:12
11 of content, for courses I was preparing to teach in
12 my role as a professor.

13 Q I see. So I'd like to give a name to the
14 work that you just mentioned so I can ask you other
15 questions about it. How would you refer to the work 09:58:32
16 that you described with Android developing
17 applications that could stream audio-video content
18 from media servers, multimedia servers?

19 A Let's call it the media player app. How
20 about that? 09:58:56

21 Q Sure. Okay. And the media player app work,
22 this was work that you did before 2011; is that
23 right?

24 A In that time frame.

25 Q Was it 2010? 2012? Are you not -- are you 09:59:14

1 not sure?

2 A I was doing a lot of work with Android. I
3 started working with Android in the late 2000s time
4 frame. And I was developing apps, preparing for
5 courses, just learning. 09:59:36

6 I don't remember, as I sit here today,
7 specifically what day or what year I was doing any
8 particular app. But I would say that I started
9 working with Android in the late 2000s, so it would
10 have been in the time frame of 2011. 09:59:51

11 Q Okay. And the media player work, you
12 designed something that could stream audio or video
13 from media servers; is that right?

14 A I developed apps that used componentry
15 provided by Android that could do that or that I 10:00:16
16 would have to customize in order to provide apps in
17 order to stream audio and/or video from web servers,
18 which were media servers in this context, to the
19 app.

20 Q Did you use media services or was this kind 10:00:33
21 of like you were putting raw MP3 files on your web
22 server somewhere?

23 A Well, so the -- I'm not sure what you mean
24 when you say "media services." Help me understand
25 that. 10:00:51

1 Q Sure. Were you interacting with like Spotify
2 or Netflix or, you know, a media service as opposed
3 to like literally loading MP3 files onto an Apache
4 web server and then calling them down?

5 A Definitely doing the latter. I don't recall 10:01:10
6 the time frame of the former, but certainly doing
7 the latter for sure.

8 Q And how did these apps that you designed
9 work?

10 A So in Android, as an Android app developer, 10:01:27
11 if you're building a custom app, of course, you have
12 to develop certain components. And there's three or
13 four general components. There are things called
14 activities, services, content providers -- and I
15 forget the fourth one, but those are the key ones, 10:01:57
16 the services, the activities, and the content
17 providers.

18 And the activities would be essentially the
19 user facing input-output touchscreen modality to get
20 user commands into the system. The services would 10:02:13
21 run in the background and actually connect either
22 locally or remotely to the content providers and
23 then the content providers would provide a
24 structured way of being able to access content,
25 which in this context would be various multimedia 10:02:33

1 files in different formats.

2 And so I was developing the apps that used
3 activities, services, and content providers. And
4 also -- why am I blanking on it -- event notifiers,
5 I think that's the other one, which basically are 10:02:54
6 used to communicate information when something
7 changes to the user interface, which is the
8 activity.

9 So I was developing applications, services,
10 event notifiers and content providers to be able to 10:03:09
11 do various things. But one of those things was to
12 be able to manipulate multimedia content that was
13 coming down from content providers and displaying
14 them on the app.

15 Q Did the Android media player work that you 10:03:24
16 were doing by 2011, did that use any cloud services?

17 A Help me understand what you mean when you use
18 that term.

19 Q Which term?

20 A "Cloud services." 10:03:39

21 Q Do you have an understanding of the word
22 "cloud"?

23 A Yes.

24 Q What is your understanding?

25 A That typically refers to capabilities, 10:03:47

1 content, processing. So it's typically processing
2 or -- and/or storage and/or communications and/or
3 perhaps predefined capabilities that are available
4 off premises as opposed to, say, a data center that
5 is located and hosted on a company's -- in the 10:04:24
6 company's data center, so services or hardware or
7 capabilities that are on premises.

8 So cloud would be storage, computing,
9 communications, and so on, other resources using
10 creation of computing capabilities that would be 10:04:44
11 available off premises. That's the cloud. So it's
12 in the cloud somewhere.

13 Q Is any server on the internet a cloud server?

14 A Not necessarily, no.

15 Q How can we differentiate what is a cloud 10:04:59
16 server versus just a regular remote server?

17 A Well, typically cloud services come from
18 so-called cloud providers that will offer different
19 kinds of packages, either things such as
20 infrastructure as a service, which is kind of the 10:05:28
21 lowest level of cloud capabilities, or platform
22 service, which is -- provides some additional
23 packages and utilities and services, up to software
24 service, which is predefined applications that live
25 in the cloud somewhere. 10:05:49

1 So to answer that question, we'd have to get
2 more context to know specifically whether something
3 was a cloud server or some other kind of server.

4 Q Using your understanding of what cloud means,
5 did the Android media player work that you did by 10:06:05
6 2011 use cloud services?

7 | A It certainly could have, yes.

8 Q I appreciate that. I was asking if it
9 actually did or not.

10 MR. SULLIVAN: You know what, Doug? Let me 10:06:23
11 just note an objection here to the extent that I
12 think -- you know, and I've let this go on for some
13 time, but I think you're getting very far afield
14 from the issue, which is supposed to be claim
15 construction today, and I think you're getting into 10:06:36
16 other aspects of this case that are just beyond the
17 scope of this deposition.

18 MR. JAFFE: I disagree. This was something
19 that he described as his qualifications, which we're
20 discussing. 10:06:52

21 BY MR. JAFFE:

22 Q So, Dr. Schmidt, please go ahead.

23	A	Do you mind repeating the question, please?
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24	Q	Absolutely.
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25 Using your understanding of what "cloud" 10:07:01
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1 means, did the Android media player work that you
2 did by 2011 use cloud services?

3 A There's no reason that it couldn't have. I
4 don't recall off the top of my head where the
5 information was hosted, but from the point of view 10:07:15
6 of the applications that I was developing in that
7 time frame, where the content was coming from was
8 not material to the ability of the app in order to
9 do its processing of multimedia content, wherever it
10 came from. 10:07:38

11 Q Were these difficult programs to design? To
12 be more specific, the Android media player programs
13 that you referenced by 2011.

14 A I'm not quite sure what you mean by
15 difficult. Difficult for who? 10:07:58

16 Q For you.

17 A It's something that I learned over a period
18 of time. When I first started working with it, like
19 anything else, there was a learning curve. I've
20 been working in this field for a long time, but I
21 had many things I had to learn that I didn't know
22 when I started.

23 Q Was implementing the Android media player
24 that you mentioned by 2011, was the implementation
25 difficult for you? 10:08:27

1 A I don't recall how long I spent on it. It's
2 hard to know what is difficult. Difficult relative
3 to what?

4 Like I said, building a multimedia player app
5 that I was talking about before was something that I 10:08:41
6 spent time doing that had a lot of learning curves,
7 especially at the beginning, because I was learning
8 Android. But some of the technology at the time
9 wasn't as mature as it has become now.

10 So I don't really recall -- I never sat down 10:08:58
11 and thought, how does that compare and contrast to
12 other things I've done as to whether they're hard.
13 It's something I worked on as a series of projects
14 for courses I was either preparing to teach or
15 teaching at the time. And so I don't recall giving 10:09:12
16 it a score in terms of the difficulty relative to
17 other things I've done.

18 Q Fair enough.

19 For the Android media player work that you've
20 referenced, was the media playing solely on the 10:09:24
21 Android phone or was it ever playing on another
22 device?

23 A So the service that I was developing could be
24 used by any of my students. So what they did with
25 it, I don't know, but I was using it in my context 10:09:43

1 to experiment with different modes of being able to
2 access and play multimedia content.

3 Q But the -- my question is the playback of the
4 multimedia content, that was on the Android device;
5 is that fair?

6 A Depending on the environment in which it was
7 developed. It could actually play out in different
8 environments than just the device.

9 I also had -- Android, as you may be aware,
10 is capable of also running on a desktop or a laptop. 10:10:22
11 So depending on how I was doing the development and
12 how I was doing the testing, it could actually run
13 on different environments.

14 Q Understood. I probably asked an inexact
15 question here. 10:10:39

16 My question is, so you have your media player
17 application, it's running on a given device,
18 Device A. The playback of the media is on Device A
19 as opposed to Device B or Device C that is not
20 running the Android application; is that fair? 10:10:55

21 MR. SULLIVAN: Object to the form of the
22 question. Compound.

23 BY MR. JAFFE:

24 Q Go ahead, sir.

25 A I don't recall all the nuances of how it was 10:11:07

1 developed, but there was certainly at least one mode
2 of being able to download the content from the
3 server, be it a cloud server or be it my local
4 laptop or be it some other server that was residing
5 elsewhere and -- or some other server that had 10:11:28
6 multimedia content that was hosted by someone
7 running the cloud and being able to play it on that
8 device. Certainly that use case was certainly
9 supported.

10 Q Could you play it on a different device? 10:11:47

11 A Well, again, like I said before, depending on
12 how I was doing the testing and the use and the
13 demonstration of the capability, it could be played
14 in different ways. It didn't always just have to be
15 played on an Android phone. It could be played on a 10:12:07
16 laptop. It could be played on a laptop connected to
17 speakers in a classroom, in which case it would come
18 out of the speakers in the classroom. There are
19 different ways it could be played.

20 Q Could it play on another -- well, strike 10:12:21
21 that.

22 I want to turn to your declaration, in
23 particular, Exhibit 1.

24 A Okay.

25 Q You've mentioned it a couple times. You have 10:12:50

1 a section entitled, "Overview of the '615 and '033
2 Patents," Roman numeral IV, correct?

3 A I think that might be Roman numeral VI.

4 Q Thank you.

5 A Maybe Roman numerals is out of date since I'm 10:13:16
6 not a Roman.

7 Q No, you're correct. Thank you. This is the
8 second deposition this week I've misread Roman
9 numerals.

10 I wanted to go to paragraph 36 in your 10:13:30
11 declaration, Exhibit 1.

12 Do you see that?

13 A I do.

14 Q There's a figure shown there, Figure 7.

15 Do you see that? 10:13:50

16 A I do.

17 Q There is a reference to something called
18 "Sonos Network 1."

19 Do you see that?

20 A I do. 10:14:01

21 Q Actually, before we get to Sonos Network 1,
22 can you just describe in your own words what
23 Figure 7 is showing us?

24 A Yeah, sure. Just a second.

25 So this is actually described in the 10:14:35

1 specification in the patent. And there's a little
2 confusion in the patent. I would need to look at it
3 to make sure I don't get this wrong, but when I read
4 the patent, I was thinking carefully how it related
5 to the figure. 10:14:54

6 So if you take a look in either the patent
7 specs on, let's see, Column 12 starting around
8 paragraph -- I'm sorry, line 28, it describes what's
9 in the figure.

10 And what is shown here is that there's a 10:15:18
11 bunch of content providers -- and this is the part
12 that's a little confusing -- but it talks about a
13 cloud network, which it labels as network 710. I
14 think actually what that is is 720 in the figure.
15 And then it talks about there being a cloud 710, 10:15:45
16 which I think in the figure is actually -- I think
17 what it is referring to there -- they got the 710
18 and 720 backwards in the spec.

19 But basically what this is showing is it's
20 showing how the cloud can be used in order to be -- 10:16:03
21 well, let me rephrase that.

22 It's showing a couple of things. It's
23 showing that there are several local playback
24 networks, which are, in fact, labeled correctly.
25 Those are the 760 and 770 portions. And those are 10:16:15

1 going to be a local area network. And those local
2 area networks can have controllers, which could be
3 various things. They could be mobile devices, they
4 could be other devices.

5 In fact, it says that you could have multiple 10:16:41
6 devices 730. It says you could have third-party
7 apps, which I assume could either be running on a
8 local device or could be running on a laptop or some
9 other type of controller. Retail, which I assume
10 would be for people using this, for example, in a 10:16:57
11 restaurant or a school. A restaurant would be
12 better.

13 And the controllers can then be used to
14 initiate playback of content that could come from
15 various places. It could come from the Sonos box, 10:17:13
16 which to me sounds like it's a -- kind of a
17 cloud-accessible server or service provided by
18 Sonos, and/or it could come from the cloud from
19 various providers.

20 And they give examples of providers like 10:17:32
21 Spotify, Pandora, Rhapsody, and so on. Third-party
22 music apps that they could provide that could be
23 integrated with the system.

24 And the content could be streamed from
25 various content providers, which is what they're 10:17:51

1 referring to here with the 720, 730, 740, and 750 in
2 order to be able to download or stream that
3 content -- stream, not download -- streaming
4 download the content from the source to the playback
5 devices where the content would be played back. 10:18:16

6 So I think that's what it is showing. It's
7 showing there's a way of being able to integrate
8 local area data networks with cloud data networks
9 using various means, some of which are provided by
10 Sonos, some of which are provided by other 10:18:39
11 providers.

12 Q Could you --

13 MR. SULLIVAN: Jordan -- Jordan, sorry to
14 interrupt. I lost power and I missed the last few
15 questions. We're having a lot of storms in the 10:18:52
16 Chicago area. Can we take a break so I can -- the
17 power has come back on, but I need to switch back to
18 my computer. I'm on my phone right now. If it's at
19 all possible, if we can take a break, I'd really
20 appreciate it. 10:19:10

21 MR. JAFFE: Of course. Absolutely.

22 And I think Dr. Schmidt was talking for a
23 while, so I'm not actually sure if you missed any
24 questions. So -- but totally fine to take a break.
25 Ten minutes, does that work? 10:19:22

1 MR. SULLIVAN: That would be great. Thank
2 you so much.

3 MR. JAFFE: No problem.

4 THE VIDEOGRAPHER: Off the record at

5 12:19 p.m. 10:19:29

6 (Recess.)

7 THE VIDEOGRAPHER: We are on the record at

8 12:32 p.m.

9 BY MR. JAFFE:

10 Q Welcome back, Dr. Schmidt. 10:32:41

11 A Thank you.

12 Q Before we took a break, we were discussing

13 Figure 7 of the '615 patent.

14 Do you recall that?

15 A I do. 10:32:51

16 Q And you provided an explanation of what you
17 understood Figure 7 to be talking about in your own
18 words.

19 Do you recall that?

20 A My own words based on looking at the 10:32:59
21 specification and my declaration, yes.

22 Q Can you use the architecture in Figure 7 to
23 work in a large area?

24 A What do you mean by "large area"?

25 Q The opposite of small. 10:33:30

1 A I'm still not quite sure what you mean.

2 Q Does the architecture in Figure 7, is that
3 limited to a small area or can it be used in any
4 size of a geographical area?

5 MR. SULLIVAN: Object to the form of the 10:33:59
6 question.

7 THE WITNESS: Which piece of -- which part of
8 Figure 7?

9 BY MR. JAFFE:

10 Q All of it. 10:34:15

11 MR. SULLIVAN: Same objection.

12 THE WITNESS: Well, so, as it says here --
13 not as it says here. As it says in Column 12 of the
14 patent, this is showing how there's local playback
15 networks, which are shown in 760 and 770. Those can 10:34:41
16 be connected via the cloud. And the cloud is what's
17 shown -- what's labeled in the diagram Figure 7 as
18 720.

19 But I really haven't looked carefully at this
20 diagram to know the details of what can work where. 10:35:08
21 I just read you what it said in the specification on
22 those lines from paragraph -- sorry, from lines 28
23 up to around line 40 in Column 12.

24 BY MR. JAFFE:

25 Q Okay. Are you familiar with the term "local 10:35:36

1 area network"?

2 A Yes.

3 Q Okay. What is your understanding of what the
4 word "local" means in the phrase "local area
5 network"?

10:35:48

6 A There's hierarchies of networks, and a local
7 area network, as a person of ordinary skill in the
8 art would have understood it at the time of the
9 invention, would be a data network, which is also a
10 construed term, that interconnects devices within a 10:36:14
11 limited area, such as a home, an office, a school, a
12 hospital, a restaurant, and so on.

13 Q When you say "a limited area," you're talking
14 about a physical geographical area?

15 A Limited meaning -- depends on what kind of a 10:36:34
16 network, a local area network we're talking about.
17 But generally accepted definitions of local area
18 network indicate they're within a limited geographic
19 area, that's correct.

20 Q Okay. What is the actual limit, in your 10:37:08
21 opinion, on what physically -- let me start over.

22 Is that all right, sir?

23 A Sure.

24 Q What is the biggest physical area that can
25 still be a local area network? 10:37:30

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1 A That depends on various factors.

2 Q What factors does it depend on?

3 A What kind of data link technology or other
4 types of technology, physical link technology that
5 is being used. 10:38:01

6 Q What is the biggest local area network you're
7 aware of?

8 A I'm not sure I've ever looked at them in
9 terms of the biggest, but I've seen definitions that
10 say a local area network is typified by something, 10:38:20
11 say, 10 meters to 100 meters, and if you get more
12 specialized equipment, you could make it go further.

13 But I think the key distinction is between
14 something that is limited geographically. In other
15 words, it's in distinction to other forms of 10:38:38
16 networks, such as a metropolitan area network or a
17 wider network.

18 Q What about a network over a square mile, is
19 that a local area network?

20 A I'd need more context in order to answer that 10:38:57
21 question.

22 Q Is a square mile a limited area as limited
23 area is used in your proposed construction of a
24 local area network?

25 A Again, without knowing more about the 10:39:14

1 hypothetical that you're proposing, I don't know
2 whether that would be considered limited or not,
3 given the type of network that's being used.

4 Q Is 100 square miles a limited area as that
5 term is used in your proposed definition of local 10:39:35
6 area network?

7 A I'm not familiar with local area networks
8 that cover 100 square miles.

9 Q So is that not a limited area?

10 A I'm not quite sure what you mean. 10:39:48

11 Q Sure. Let me ask my question again.

12 Is 100 square miles a limited area?

13 A Limited with respect to what?

14 Q I'm using -- do you see -- if you look at
15 paragraph 5 of your opening declaration, "Summary of 10:40:05
16 Opinions," Roman numeral II, which I think I have
17 correct this time.

18 A Yes.

19 Q So, again, we're looking at paragraph 5 of
20 your declaration, which we've marked as Exhibit 1. 10:40:25
21 Do you see that there's a chart in paragraph 5? Do
22 you see that?

23 A I do.

24 Q And one of the rows is for the term "local
25 area network." 10:40:42

1 Do you see that?

2 A I do.

3 Q And then the right-hand column for that row,

4 the right-hand column is labeled "POSITA's

5 Understanding."

10:40:55

6 Do you see that?

7 A I do.

8 Q And for the row labeled "Local Area Network,"

9 your opinion is that a POSITA's understanding is

10 that a local area network is, quote:

10:41:06

11 "A data network that

12 interconnects devices within a limited

13 area, such as a home or office."

14 Correct?

15 A I see that, yes.

10:41:13

16 Q So do you see the phrase "limited area"

17 there?

18 A Yes.

19 Q Do you understand what that means?

20 A I've looked at and a person of ordinary skill

10:41:23

21 in the art looking at the patent and seeing the

22 examples that are used in the patent would have

23 understood that a local area network was a data

24 network that interconnected devices within a limited

25 area, such as a home or office or other things that

10:41:46

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1 are bounded by the capabilities of local area
2 network technology.

3 Q Thank you for that. My question was a little
4 bit different.

5 The phrase in your declaration "limited 10:42:01
6 area" -- do you see that?

7 A I do.

8 Q Do you understand what the phrase "limited
9 area" means?

10 MR. SULLIVAN: Objection. Asked and 10:42:11
11 answered.

12 THE WITNESS: As it says in the construction
13 that is put here, it gives an example of a limited
14 area, such as a home or office. So something that
15 is a limited geographical region, in contrast, say, 10:42:25
16 to a wide area network, which could cover something
17 larger than a home or office, such as a city or a
18 country or the planet. That would be the -- that
19 would be one differentiator of local area network
20 from a wide area network. 10:42:45

21 BY MR. JAFFE:

22 Q Thanks. Let me ask it a slightly different
23 way to make sure we're not talking past each other.

24 You don't understand what the phrase "limited
25 area" means as that phrase is used in paragraph 5 of 10:43:00

1 your declaration, correct?

2 A No, that's not correct.

3 Q Okay.

4 A Sorry. So what you said is incorrect, if I

5 understood what you asked. 10:43:15

6 Q Fair enough.

7 Is 10 square miles a limited area, as that
8 phrase is used in paragraph 5 of your declaration?

9 A Again, looking at the examples that are given
10 here, "limited" in this context is relative to wide 10:43:35
11 area network, which could be of broader scope than
12 you'd expect to find in a home or office.

13 And a person of ordinary skill in the art at
14 the time of the invention who read the specification
15 and looked at the diagrams and the explanation of 10:43:59
16 what was being proposed here would have understood
17 that the local area network that was referenced was
18 referring to something that was on the order of a
19 home or office. That would be the understanding the
20 person would have of what a local area network would 10:44:15
21 be, given the knowledge of what a local area network
22 was based on extrinsic evidence, as well as seeing
23 how it was used in the context of the patent where
24 it is correlated with small.

25 Q When you said -- well, just to follow up on 10:44:30

1 your last question. So when you say "limited area,"
2 you mean small area; is that fair?

3 A I believe there's a specific phrase in the --
4 one of several phrases within the patent itself that
5 talks about the local area network or other small 10:44:56
6 network, which is on -- I think it's Column 10 of
7 the patent specification talks about the network
8 being a local area network or other small network.

9 And, again, a person of ordinary skill in the
10 art would have understood that to be in the context 10:45:16
11 of something like a home or office or a restaurant
12 or something.

13 Q Ten square feet, that's a limited area,
14 right?

15 MR. SULLIVAN: Objection. Ambiguous. 10:45:35

16 THE WITNESS: In the context of local area
17 network, a local area network is something that
18 could encompass an area that is ten square feet.

19 BY MR. JAFFE:

20 Q 100 square miles is not a limited area, 10:45:57
21 correct?

22 A Again, looking holistically in terms of the
23 use of the phrase "local area network," in
24 particular in the context of how local area network
25 is being used in the context of the '615 and '033 10:46:15

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1 patents, the local area networks described in there,
2 100 square miles is, my understanding, well beyond
3 the scope of what a local area network would have
4 been understood to mean at the time of the
5 invention.

10:46:35

6 Q 100 square miles is an area, correct?

7 A You're taking the term "area" out of context
8 from local area network here. You're pulling apart
9 the phrase into pieces when the phrase "local area
10 network" is a term of art that is understood to
11 relate to the underlying technology for being able
12 to support high speed communication within the local
13 area network confines of the technology.

10:46:55

14 So "area" by itself is not really the issue.
15 It's the use of the phrase "local area network" as a
16 term of art.

10:47:17

17 Q Okay. Let me ask it slightly differently.
18 Is 100 square miles an area?

19 A 100 square miles is an area, yes.

20 Q Is 100 square miles limited?

10:47:33

21 A Relative to what? I mean, certainly with the
22 concept of a local area network, a local area
23 network, as I would understand the technology at the
24 time of the invention, would not cover 100 square
25 miles.

10:47:59

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1 So, again, pulling the words apart piece by
2 piece doesn't really shed light on how a person of
3 ordinary skill in the art would have understood what
4 a local area network or other small network to have
5 meant in the context of reading the '615 and '033 10:48:14
6 patents.

7 Q Your understanding of what local area network
8 means, as shown here in paragraph 5 of your
9 declaration, it uses as examples home or office; is
10 that right? 10:48:37

11 A Well, there's quite a bit of discussion about
12 local area network throughout the opening report. A
13 summary of that construction appears in -- in the
14 table in paragraph 5.

15 Q What is the construction that you are saying 10:48:52
16 is correct for local area network?

17 A I don't understand the question.

18 Q What is the appropriate construction of local
19 area network, in your opinion?

20 A As it says in paragraph 5, the -- as it says 10:49:07
21 in the table in paragraph 5, the term "local area
22 network," the proper construction for that for
23 someone of ordinary skill in the art at the time of
24 the invention would be a data network that
25 interconnects devices within a limited area, such as 10:49:43

1 a home or office, which are not meant to be
2 limiting. There could be other examples of data
3 networks interconnecting devices that were not homes
4 or offices. An example might be a restaurant, for
5 example. 10:50:02

6 Q The construction that you are proposing for
7 local area network is, quote:

8 "A data network that
9 interconnects devices within a limited
10 area, such as a home or office." 10:50:15

11 Correct?

12 A That is correct.

13 Q And home or office are examples in that
14 construction, correct?

15 A That is correct. 10:50:28

16 Q There is no reference to the size of an area
17 in your construction of local area network, correct?

18 A When you say "size," what do you mean by
19 size?

20 Q There's no small, big -- there's no 10:50:46
21 references to what is the maximum or minimum size of
22 the area in your construction of local area network,
23 right?

24 A Again, I don't -- it says, "within a limited
25 area," and then it gives a couple of examples which 10:51:09

1 are indicative of the size that is being defined
2 here.

3 Q I see. So those examples do limit the scope
4 of the construction; is that right?

5 A I'm not sure what you mean by "limit," but my 10:51:25
6 understanding is that the POSITA at the time of the
7 invention would have understood a local area network
8 to be a data network that interconnects devices
9 within a limited area, such as a home or office.

10 There could be other examples as well that 10:51:49
11 would be consistent with the size of a home or
12 office, like a restaurant, for example.

13 Q Okay. So when you said "limited area," you
14 really meant a small area; is that fair?

15 A Well, as the patent itself says, it's a small 10:52:08
16 network. As I mentioned before, I think it was on
17 Column 10 of the patent spec talks about a local
18 area network or other small network.

19 Q The construction that you've actually offered
20 doesn't mention small, right? 10:52:30

21 A I think, again, a person of ordinary skill in
22 the art would have understood that limited in this
23 case is in contrast to something that is large, like
24 the entire internet, which is a wide area network,
25 or even a metropolitan area network, which is much 10:52:54

1 larger than a home or office.

2 So in that case, I think that limited would
3 imply something that was not large, as opposed to
4 something that was -- if it was not limited, it was
5 going to be the internet, it would be large or not 10:53:16
6 limited by the confines of something like a home or
7 office.

8 Q What is the opposite of limited?

9 A In this case, it's really talking about,
10 again, the networking capabilities to be able to 10:53:34
11 transmit packets without loss at the appropriate
12 speed.

13 So when you start thinking about something
14 that is not a limited area, it would be something
15 like the internet, again, which encompasses -- it 10:53:51
16 encompasses many things. Certainly most of the
17 planet and perhaps beyond.

18 Q Would you agree that the opposite of limited
19 is unlimited?

20 A No, not necessarily. 10:54:04

21 Q And I want to go back to an earlier question.

22 The word "small" does not appear in your
23 proposed construction for local area network,
24 correct?

25 A Again, I think a person of ordinary skill in 10:54:20

1 the art would have understood that an example like a
2 home or office or other things that are like that
3 are smaller rather than larger and -- again,
4 especially keep in mind that a person of ordinary
5 skill in the art in this context by my definition of 10:54:42
6 a person of ordinary skill in the art would have had
7 education experience and practical experience that
8 would have led them to understand the different
9 types of networks that were available.

10 So local area network would have been one 10:54:57
11 that a person of ordinary skill in the art would
12 have understood what that meant, and that really by
13 definition is relatively small or a limited
14 geographic area.

15 A person of ordinary skill in the art would 10:55:11
16 have understood what that means because they would
17 have been familiar with the different types of
18 networking technology available at that time. And
19 they would have understood that was in contrast to a
20 wide area network, which is much larger. It's not 10:55:22
21 as limited geographically.

22 Q Where does the word "small," S-M-A-L-L,
23 appear in your proposed construction for local area
24 network?

25 MR. SULLIVAN: Objection. Asked and 10:55:37

1 answered. Now we're bordering on harassment, but
2 I'll let him answer the question again.

3 THE WITNESS: So, as I said before, a person
4 of ordinary skill in the art who read this
5 construction with their understanding that would be 10:55:51
6 consistent with a POSITA's understanding is that a
7 local area network is necessarily limited or
8 small -- especially when given a couple of examples
9 like a home or an office -- a person of ordinary
10 skill in the art would have understood that to be 10:56:11
11 distinct from other types of networks that they also
12 would have been aware of because of their experience
13 in the field, such as a metropolitan area network or
14 a wider network, which are much larger, in some
15 cases encompassing the whole planet and perhaps 10:56:27
16 beyond.

17 BY MR. JAFFE:

18 Q Are you familiar with the term "data"?

19 A Yes.

20 Q What is your understanding of the term 10:57:19
21 "data"?

22 A In which context?

23 Q In the context of the '615 or '033 patents.

24 A So in the context of those patents, then data
25 in the context of data network would involve 10:57:48

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1 discrete digitized representations of information or
2 content or various terms that describe what
3 applications and services send and receive.

4 So data in this case is really referring to
5 discrete chunks of information that are going to be 10:58:11
6 broken up into what are called data units or packets
7 for transmission through a data network or a local
8 area network, which is an example of a data network.

9 Q Let's put aside the '615 and '033 patents for
10 a second -- metaphorically or, figuratively, I
11 should say, since we're not sitting next to each
12 other.

13 What is the plain and ordinary meaning of
14 data?

15 MR. SULLIVAN: Object to the form of the 10:58:45
16 question.

17 THE WITNESS: I don't think that term can be
18 answered out of context.

19 BY MR. JAFFE:

20 Q If one of your students in 2011 came up to 10:58:54
21 you, maybe in the same class you were working on
22 your Android media project, and asked you what data
23 was, what would you tell her or him?

24 A Depending on what they were asking and the
25 context, I could give different answers. 10:59:13

1 If they were a Star Trek fan, then Data is
2 the name of a famous character on Star Trek: Next
3 Generation. If they were talking about -- if it was
4 a database, if we were talking in a database course,
5 it would be content that could be created, read, 10:59:33
6 updated, and displayed.

7 If it was in the context of a networking
8 course and it was a computing networking course,
9 then it would be the discrete, packetized
10 information that could be passed around and routed 10:59:46
11 through a data network.

12 So it really depends on the context.

13 Q Is there such a thing as analog data?

14 A In what -- in what sense?

15 Q In the sense is -- is analog data a thing 11:00:01
16 that exists that you're aware of?

17 A Again, I would need more context to be able
18 to answer that question.

19 Q You're not sure whether -- let me ask you.
20 Have you ever heard the term "analog data"? 11:00:16

21 A Yes.

22 Q And in what context have you heard the term
23 "analog data"?

24 A Typically in terms of how analog signals send
25 information using continuous wave forms. 11:00:33

1 Q Would you agree that data can either be
2 analog or digital?

3 A Again, in what context?

4 Q What part of my question are you finding
5 difficult? 11:00:52

6 MR. SULLIVAN: I object to the question.
7 Object to the form of the question.

8 THE WITNESS: Are we talking about -- are we
9 still in the context of the '615 and '033 patents or
10 are we talking about data more broadly as we started 11:01:08
11 earlier?

12 BY MR. JAFFE:

13 Q Sure. I'm just talking about data generally.
14 Would you agree that data generally can
15 either be analog or digital? 11:01:17

16 A I don't know if there's -- well, the reason
17 I'm thinking carefully before I answer is I'm not
18 sure if it's a binary -- I don't know if there's
19 only two different types of data. There could be
20 data that you store in your head and when someone 11:01:33
21 asks you a question, you recite it back to them. Is
22 that analog? Is that digital? It could be neither
23 one.

24 I think I would look at this in the context
25 of the '615 or '033 patent. A person of ordinary 11:01:47

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1 skill in the art would have understood the data
2 that's being described in that context to refer to
3 information or content that has been digitized into
4 packets.

5 Q I didn't mean to necessarily set up a binary 11:02:04
6 choice. So let me try and ask my question again.

7 Is that all right, sir?

8 A Sure.

9 Q Data generally can be analog or digital or
10 perhaps in other forms; is that fair? 11:02:25

11 A Again, depending on the context, certainly
12 there's different ways to -- if we're talking about
13 communicating over networks, there's different ways
14 to convey information or data. It depends on the
15 context. 11:02:48

16 Q In the field of networking, data can either
17 be analog or digital; is that fair?

18 A Conventionally or historically, networks have
19 sent data in various ways. The more traditional way
20 of doing things is using analog continuous wave 11:03:05
21 forms to send data. That's historically the way
22 voice networks were designed.

23 When packet switching was introduced some
24 time ago, there were other ways of being able to
25 dedicate certain layers of the protocol stack. And 11:03:26

1 in that case, we would think about it as putting two
2 protocol data units or packets or frames, depending
3 on the layer, that was another way to send data.
4 And those were two distinct ways of being able to
5 send data. 11:03:46

6 Digital data, which is what we can
7 colloquially think of as a term of art to be data
8 network versus in wave forms, which we colloquially
9 think about as a term of art as being so-called
10 voice networks or circuit switched networks. 11:04:01

11 Q We've used this term a couple of times. What
12 is a network?

13 A Again, what is the context?

14 Q In the field of networking in 2011.

15 A In 2011, do you mean networking as in 11:04:29
16 telecommunications networking, computer networking,
17 social networking? Which -- which types of context
18 are we thinking of here?

19 Q Computer networking. So I'll ask it again.

20 In the field of computer networking in 2011, 11:04:48
21 what is a network?

22 A Well, let's see. I would say it's a network
23 without being -- well, in the field of computer
24 networking, people think of computer networks
25 typically as data networks. And a person in 2011 11:05:18

1 would have thought that a data network would be a
2 medium that interconnects devices so they can send
3 and receive digital packets from each other.

4 So in the field of computer networking,
5 that's what people think of is data network and 11:05:32
6 computer network are fairly synonymous.

7 Q So there are no networks of computers that
8 communicate using analog data?

9 A Well, it depends on what level of abstraction
10 that you're talking about. As I mentioned earlier, 11:05:53
11 networks are layered. And different layers in the
12 network stack have different roles to play, both in
13 hardware, software, as well as the medium or the
14 means by which the information is communicated. So
15 without being more specific in a specific 11:06:16
16 hypothetical, it's hard to know how to answer that
17 question.

18 Q Were you -- are you aware of any computer
19 networks in 2011 that communicated analog data?

20 A In 2011, there was a distinction which has 11:06:40
21 been well understood for a long time that there's
22 different types of networks. And that's been true
23 for a very long time. And people understand if you
24 say "network," then it's not really clear, it's an
25 ambiguous term. It would be, you know, a medium 11:07:00

1 that interconnects devices or something like that.
2 But that could be different things. So that could
3 be realized in different ways.

4 But without bounding the scope of the
5 context, a person of ordinary skill in the art 11:07:16
6 wouldn't know what was meant if you talk about
7 network. However, having said that, if you would
8 use the word "data network" in 2011 -- and,
9 actually, before that as well -- because this is a
10 term that has been around for many years, a data 11:07:35
11 network has a meaning as a term of art that a person
12 of ordinary skill in the art would have understood
13 what that meant.

14 But a network, just the word "network" by
15 itself doesn't provide enough information. And 11:07:47
16 especially if you take a look at the content --
17 especially if a POSITA was reading the patent and
18 looking at what was being disclosed and how that
19 disclosure was being contrasted to prior approaches
20 in the field of consumer electronics and playback 11:08:04
21 devices and so on, they would have understood that
22 data network had a very key meaning there and was
23 being contrasted with traditional ways of being able
24 to hook together audio devices or media devices in
25 general, using means other than data networks. 11:08:24

1 Q Is it fair to say that you can't identify any
2 specific computer networks in 2011 that communicated
3 analog data?

4 A I'd have to look at more examples. I'm sure
5 there's ways of seeing examples out there, but I 11:09:05
6 don't know them off the top of my head.

7 Q Sitting here today, you can't think of any;
8 is that fair?

9 A Well, again, going back to what we were
10 saying before, depending on what level of the stack 11:09:22
11 that you're at and how a computer was being used,
12 there's -- there are plenty of examples of computers
13 that are connected by analog networks. That's not
14 uncommon.

15 Q What are some examples of computers that are 11:09:44
16 connected by analog networks, by 2011?

17 A Places that use public switch telephone
18 networks that were still using traditional analog
19 signals, circuit switched networks.

20 Q Okay. Are those computers -- well, are those 11:10:23
21 data networks?

22 A Again, without knowing more of the details of
23 the hypothetical, it would be hard to say in the
24 abstract.

25 Q Okay. In the '615 and the '033 patents, did 11:10:38

1 the patentee redefine the term "data network"?

2 A Relative to -- when you say "redefine,"
3 relative to what?

4 Q Its plain and ordinary meaning in the field.

5 A Not that I'm aware of, no. 11:11:12

6 Q Okay. In putting forth your opinions on data
7 network, you're not relying on any lexicography in
8 the '033 or '615 patents. Fair?

9 A I'm not sure what you mean by lexicography.

10 Q Sure. Let me ask it this way. 11:11:40

11 Are you familiar with the term "lexicography"
12 as that term is used in claim construction?

13 A No.

14 Q So that's -- it's fair to say that
15 lexicography is not something you've opined on in 11:11:47
16 your declarations, at least that you're aware of?

17 A It's kind of like parts of a sentence --
18 subject-verb agreement or something. But if you
19 could explain what you mean by lexicography, I'm
20 sure I can follow. 11:12:14

21 Q I'm happy to do that.

22 So lexicography is the patent kind of
23 providing a specific definition or redefining what
24 the term means. And I don't -- I'm not trying to
25 provide you with legal advice here, but I just want 11:12:28

1 to be responsive to your request. But that's what
2 I'm referring to by lexicography. So let me ask it
3 again.

4 Before I just mentioned the word
5 "lexicography," had you ever heard that before? 11:12:43

6 A Yes, but I didn't understand it in the
7 context of claim construction. So I wanted to make
8 sure I understood if it has a precise legal meaning,
9 lexicography -- words are used in very precise ways
10 in legal proceedings, and I wanted to be sure I 11:13:05
11 understood how it was being used here.

12 Q Sure. Fair enough.

13 Are you relying on any disclaimer in the '615
14 or '033 patents with regard to the meaning of data
15 network? 11:13:19

16 MR. SULLIVAN: Object to the form of the
17 question to the extent it calls for a legal
18 conclusion.

19 THE WITNESS: Again, help me understand. As
20 with lexicography, that means different things in 11:13:34
21 different contexts. I've got to believe that
22 disclaimer means something in this context too.

23 BY MR. JAFFE:

24 Q Sure. Is there a clear and unambiguous
25 statement in the patent specification that you 11:13:48

1 believe changes the plain and ordinary meaning of
2 data network?

3 MR. SULLIVAN: Object to the form of the
4 question.

5 THE WITNESS: If you're asking does the 11:14:07
6 patent have a glossary of terms that includes data
7 network and defines it to be something that is
8 inconsistent with a person of ordinary skill in the
9 art's definition at the time or when the first time
10 data network appears, it says, "such as" and gives 11:14:23
11 an example that would be inconsistent, I don't
12 believe that there are examples of data network in
13 the specification that way.

14 I think data network is used here in the
15 context as I described it, and as the person of 11:14:40
16 ordinary skill in the art would have understood it
17 as well, to mean the -- a medium that interconnects
18 devices and then allows the ability -- and enables
19 them to send and receive data packets with each
20 other. I think that's the way it is being used in 11:15:00
21 the specification.

22 And I think that's consistent with what a
23 person of ordinary skill would have understood at
24 the time of the invention. And I don't think it
25 defines it some other way in the specification 11:15:15

1 beyond that.

2 BY MR. JAFFE:

3 Q You agree that the specification in the '615
4 and '033 patents use the term "data network" in
5 accordance with its plain meaning? 11:15:28

6 A Again, when you look holistically at how the
7 patent is describing what Sonos is doing, especially
8 contrasting it with more conventional approaches or
9 the conventional approaches at the time of creating
10 multimedia systems that used traditional speaker 11:15:55
11 wires to communicate from an AV receiver or
12 something equivalent to that to a passive speaker, I
13 think it's very clear that it's using this to
14 describe something that goes above and beyond what
15 was there in the conventional art for entertainment 11:16:15
16 systems in home or office.

17 Q Where does the specification of the '615 and
18 '033 patent use the term "data network" inconsistent
19 with its plain meaning?

20 A I'm not quite sure what that question means, 11:16:31
21 but if I understand your question, the opinion in my
22 declarations is giving the plain and ordinary
23 meaning that a POSITA would have understood a data
24 network to mean, which really involves two things.
25 One, information that is being sent and received is 11:16:56

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1 put into some digital packet form. And, number two,
2 that it's possible to do communication between
3 senders and receivers. It's not a one-way flow.
4 It's potentially a way you can flow back and forth
5 or around a ring or whatnot in order to be able to 11:17:14
6 allow the senders and receivers to communicate with
7 each other. That is what my understanding of what
8 the plain and ordinary meaning would have been at
9 the time of the invention.

10 Q Can you identify any specific portions of the 11:17:30
11 '615 or '033 patents that use the term "data
12 network" in a manner inconsistent with its plain and
13 ordinary meaning?

14 A Again, assuming that when you say "plain and
15 ordinary meaning," that the plain and ordinary 11:17:43
16 meaning is a medium that interconnects devices so
17 that they can send and receive digitized data
18 packets. Assuming that's the plain and ordinary
19 meaning you're describing, I've seen nothing in the
20 '615 or '033 patents at odds with that. 11:18:01

21 Q Did the patentee redefine the term "local
22 area network" in the '615 or '033 patents?

23 A Again, help me understand what you mean by
24 "redefine."

25 Q Sure. Let me ask a better question. 11:19:09

1 Did the patentee redefine the term "local
2 area network" differently from its plain and
3 ordinary meaning in the '615 and '033 patents?

4 A Assuming the plain and ordinary meaning of a
5 local area network would have been a data network 11:19:25
6 that interconnects devices within a limited area,
7 such as a home or office or other limited areas,
8 like a hospital or school or whatnot, then I don't
9 see anything in the '615 or '033 patents that are at
10 odds with that plain and ordinary meaning. 11:19:48

11 Q Are there any statements in the '615 or '033
12 patents that provide a definition for the term
13 "local area network" that is inconsistent with its
14 plain and ordinary meaning?

15 A Again, assuming that the plain and ordinary 11:20:12
16 meaning of local area network is a data network that
17 interconnects devices within a limited area, such as
18 a home or office or other limited areas like a
19 school or a restaurant, I don't see anything -- I
20 don't recall seeing anything in the patent 11:20:33
21 specifications that were inconsistent with that
22 plain and ordinary meaning.

23 Q And were you assuming that the plain and
24 ordinary meaning was what you just said it was in
25 your analysis, or is that your opinion that that is 11:20:50

1 the plain and ordinary meaning?

2 A So it's my opinion, stated in both of the
3 declarations, that a person of ordinary skill in the
4 art at the time of the invention would have -- would
5 be in congruence or would have been in agreement 11:21:09
6 with that plain and ordinary meaning, that the local
7 area network was a data network that interconnects
8 devices within a limited area, such as a home or
9 office or similar.

10 Q Are there any clear and unambiguous 11:21:27
11 statements in the specification or prosecution of
12 the '615 or '033 patents that changed the plain and
13 ordinary meaning of local area network?

14 A It's my opinion that the '615 and '033
15 patents are consistent with respect to the plain and 11:21:52
16 ordinary meaning of local area network to a person
17 of ordinary skill in the art at the time of the
18 invention where they would have understood a local
19 area network to mean data networks that interconnect
20 devices within a limited area, such as a home or 11:22:10
21 office.

22 Q Can you identify any portions of the
23 specification or file histories of the '615 or '033
24 patents that use the term "local area network"
25 inconsistent with its plain and ordinary meaning? 11:22:24

1 A So after reviewing the patents, the '615 and
2 '033 patents, and histories and so on, I have not
3 seen anything in the specification or other
4 intrinsic evidence that is inconsistent with a
5 person of ordinary skill in the art's understanding 11:22:51
6 of the patent invention that the plain and ordinary
7 meaning of local area network would have been a data
8 network that interconnects devices within a limited
9 area, such as a home or office.

10 Q Is a network that transmits voice -- well, 11:23:12
11 that's a circular question. Let me ask a better
12 one.

13 Is that all right, Dr. Schmidt?

14 A Sure.

15 Q If you have two computers that communicate 11:23:28
16 via voice, is that a data network?

17 A Again, without having more information about
18 the various technologies involved and the hardware
19 and software components that would be involved in
20 such a communication, it's hard to give a precise 11:23:57
21 and accurate answer.

22 Q It's possible to send voice in analog form,
23 right?

24 A I'm sorry. Could you re-ask the question,
25 please? 11:24:16

1 Q It's possible to send voice in analog form,
2 right?

3 A Public switched telephone networks sent voice
4 in analog form for decades, if not more.

5 Q And voice can also be sent in digital form, 11:24:32
6 correct?

7 A So, again, it's certainly possible to encode
8 voice and packetize it, that's correct, yes.
9 Depending again on what technologies are being used
10 and what layer of the protocol stacks we're talking 11:24:50
11 about.

12 Q Do you consider voice information data?

13 A Again, thinking very specifically about how
14 we look at a data network versus, say, a voice
15 network, I think we have to be careful in this case 11:25:10
16 because using -- data network is a term that has --
17 it's a term of art that has a specific meaning
18 relative to alternative historical technologies like
19 voice networks, which use analog.

20 Whether voice is data and therefore 11:25:31
21 everything is a data network, that's a different
22 matter. So I think in this case when we're thinking
23 about terms that are being used very precisely and
24 the way they're being used in the patent, we owe it
25 to the process to think very precisely about how we 11:25:49

1 use those terms.

2 So is voice data, that's -- in that case the
3 word "data" is being used in different ways. And so
4 breaking data network up into data and network and
5 then saying anything that sends over a network is 11:26:13
6 inherently data, that is missing the point of what a
7 data network is in terms of the technology
8 understood by a person of ordinary skill in the art.

9 MR. JAFFE: All right. I'm about to change
10 topics. Does anyone want to take a five- or 11:26:40
11 ten-minute break?

12 THE WITNESS: Can we take a short break? I
13 haven't had lunch yet.

14 MR. JAFFE: Yeah. Maybe we can go off the
15 record for a sec. 11:26:53

16 THE VIDEOGRAPHER: We're off the record at
17 1:26 p.m.

18 (Recess.)

19 THE VIDEOGRAPHER: We are on the record at
20 1:40 p.m. 11:40:04

21 BY MR. JAFFE:

22 Q Welcome back, Dr. Schmidt.

23 A Thank you.

24 Q If you could turn to your opening
25 declaration, which we marked as Exhibit 1, and 11:40:17

1 starting at paragraph 99, you provide some analysis
2 regarding a claim term, quote, "a media particular
3 playback system."

4 Do you see that?

5 A Yeah, almost there. Let me just get there. 11:40:34

6 Yes, I'm there.

7 Q Do you see in paragraph 100, you say -- and
8 I'm not going to read the whole thing, but you say
9 that:

10 "The word 'particular' was 11:40:58

11 erroneously included in the phrase of

12 'media particular playback system.'"

13 Do you see that?

14 A I do.

15 Q Why -- how did you arrive at the opinion that 11:41:10

16 the word "particular" was erroneously included in

17 the phrase "media particular playback system"?

18 A So that analysis occurs throughout the rest
19 of that section.

20 And let's take a look starting in -- I think 11:41:29

21 it's paragraph 104 where it is showing the -- it's

22 kind of comparing how the term "media playback

23 system" was used consistently in other parts of the

24 spec. And then how it shows up in method -- in

25 Dependent Claim 3 to say "a media particular 11:42:02

1 playback system."

2 Then there's also discussions starting on
3 paragraph 108 that describes how the patent
4 specification refers to local playback systems to
5 include one or more multimedia playback devices. 11:42:29
6 And so that would be an example of what a person of
7 ordinary skill in the art would have understood to
8 be a media playback system.

9 And then going to paragraph 109, it talks
10 about how nowhere else in the specification or other 11:42:44
11 claims besides Claims 3, 15, and 26, do the term --
12 does the phrase "media particular" or "multimedia
13 particular" occur at all.

14 And so then it says at the end of paragraph
15 109 that this would lead a POSITA to understand the 11:43:03
16 phrase "a media particular playback system" was a
17 typographical error. So that's part of the
18 analysis.

19 Then I go further to look into the
20 prosecution history of the '615 patent. And there's 11:43:23
21 no -- nothing in there that indicates the word
22 "particular" meant anything in this context of media
23 particular -- media particular playback system.

24 And then on paragraph 111 I talk further
25 about how the word "particular" was put in there at 11:43:44

1 some point to refer to a particular playback device.

2 And so in paragraph 112 I talk about how it
3 looks like, to maintain proper antecedent basis and
4 consistency throughout the claims, whoever was
5 drafting the patent put the word "particular," the
6 adjective, "particular" before "playback device."

11:44:06

7 But it looks like they did that inadvertently
8 because it doesn't really -- it doesn't appear
9 anywhere else. It's not used in other parts of the
10 claim. The specification and so on don't describe
11 that. And so it just looks to me like it's a typo.

11:44:24

12 Q When you said the word "erroneously," in
13 paragraph 100, you meant that it was an error for
14 the word "particular" to be included; is that right?

15 A Yeah. I think I used a better term other
16 places, like "typographical error."

11:44:48

17 Q Including the word "particular" in a media
18 particular playback system was a mistake?

19 A Well, it was a typographical error in the
20 sense that it doesn't -- that phrase doesn't show up
21 in other places in the specification or the
22 prosecution history. It doesn't appear to have been
23 put in there at the request of the patent examiner
24 to clarify something. It just looks like

11:45:09

25 somebody -- some drafter accidentally added a

11:45:28

1 typographical error putting the word "particular" in
2 there.

3 Q And if the word -- if it wasn't a mistake, do
4 you have an understanding of what the phrase "a
5 media particular playback system" would mean? 11:45:49

6 A No. There's analysis -- there's a fairly
7 lengthy analysis in Exhibit 2 in my reply
8 declaration that -- I believe it starts Roman
9 numeral IX on page -- paragraph 81 that goes through
10 different interpretations that Dr. K put forth. And 11:46:18
11 I describe how I don't see any support for his
12 opinions found in the specification, found in the
13 prosecution history, or to be found in trying to
14 make sense out of it.

15 So I've seen other interpretations. I don't 11:46:38
16 think they're meaningful for the reasons that I
17 describe in my reply declaration.

18 Q Do you think Dr. Kyriakakis's potential
19 interpretations are unreasonable?

20 A Well, as I say numerous places, especially in 11:46:56
21 the reply declaration, for each of the hypotheticals
22 he puts forth as to what the word -- what the phrase
23 "media particular" could have meant, I don't see
24 that a person of ordinary skill in the art reading
25 the patent, especially the whole, the comprehensive 11:47:19

1 intrinsic evidence and so on, would have found
2 support for those alternative interpretations in
3 light of what the patent was about and what the
4 claims were disclosing. So -- and how the Sonos
5 system works. 11:47:40

6 So it just struck me that they were -- his
7 hypotheticals, in my mind, were not substantiated by
8 any of the evidence that I saw when I looked into it
9 in more detail.

10 Q Do you think the proper interpretation of a 11:47:55
11 media particular playback system is subject to
12 reasonable debate?

13 A I think -- I'm not -- I have a feeling the
14 word "reasonable debate" probably means something
15 with a legal -- a legal definition. But in looking 11:48:20
16 at the evidence that I disclosed or initially wrote
17 about in my opening report and then taking a careful
18 look at what Dr. K said in his report in crafting my
19 reply report, I don't think there was -- I didn't
20 find his evidence compelling to make me think that a 11:48:41
21 reasonable person would have read it that way.

22 Q Understood.

23 A The ways -- the ways he was describing it.

24 Q Understood. I appreciate that.

25 My question is just do you think that the 11:48:54

1 question of a proper interpretation of this term,
2 "media particular playback system," is subject to
3 reasonable debate or not?

4 A So there's a number of places in my reply
5 report where I specifically talk about that issue. 11:49:10
6 And it looks like there are several of them where I
7 mention this. But I don't believe that this matter
8 is a reasonable matter to see a different point of
9 view on.

10 It would be either -- it would be 11:49:34
11 unreasonable to do that or there'd be no reasonable
12 reason to do it. I'm not sure what the right phrase
13 is because I'm not quite sure what unreasonable
14 means in a legal sense, but it doesn't seem like
15 there's evidence that backs it up. 11:49:48

16 Q We discussed the term "multimedia" earlier.
17 Do you recall that?

18 A I do.

19 Q And the phrase that we're discussing now is
20 "a media particular playback system," correct? 11:50:05

21 A That's correct.

22 Q What is the difference between media and
23 multimedia in the context of the '615 and '033
24 patents?

25 A I think they're using those terms 11:50:17

1 synonymously.

2 For example, if you take a look at my reply
3 report -- my reply declaration -- sorry -- my reply
4 declaration, in I think it's paragraph 88, there's
5 examples that they give, the specification gives, 11:50:43
6 talking about what a multimedia unit provides.

7 And in particular, the -- I think it's the
8 very last sentence in paragraph 88 has a quote from
9 the specification that talks about how a multimedia
10 unit, like a playback device, provides audio-video 11:51:05
11 and/or audiovisual output.

12 So, first of all, multimedia can be -- as we
13 talked about much earlier in our chat today,
14 multimedia could be audio, it could be video without
15 audio, or it could be audio without video, video 11:51:26
16 without audio, it could be audio-video. It could be
17 a combination or it might just be one of them. And
18 the term "multimedia" as used as a term of art could
19 be any or all of those things.

20 Q What is the plain and ordinary meaning of 11:51:43
21 media in 2011?

22 A Again, it depends on the context.

23 Q In the field of the '615 and '033 patents,
24 what is the plain and ordinary meaning of media?

25 A Again, I think it is being used synonymously 11:52:08

1 with multimedia, so it could be audio, video,
2 audio-video, et cetera. It could be audio-video
3 and/or audio-video, or audiovisual.

4 Q In the field of the '615 and '033 patents,
5 you viewed the plain and ordinary meaning of media 11:52:29
6 and multimedia as the same; is that fair?

7 A They talk about, for example, in the
8 specification and the claims and the specification,
9 they talk about a media playback system that can be
10 used to play back media. And in this case they 11:52:50
11 use -- they talk about multimedia unit. And I think
12 those are referring to the same basic sets of
13 things, media, multimedia.

14 Q I appreciate that. That doesn't quite answer
15 my question, though. My question was -- apologies 11:53:10
16 if it was unclear. I'll repeat it.

17 In the field of the '615 and '033 patents, do
18 you view the plain and ordinary meaning of media and
19 multimedia as the same?

20 A When thinking about how the patents describe 11:53:25
21 what it is that their playback systems are doing,
22 they refer to media playback systems, and those are
23 also referred to as multimedia units that can
24 provide audio-video and/or audiovisual or
25 audio-video content. 11:53:54

1 So it seems to me that a media playback
2 system is used to play multimedia content and that
3 could be any of those different -- any or all of
4 those different examples that I gave.

5 Q In the networking field in 2011, what is the 11:54:10
6 plain and ordinary meaning of media?

7 A Well, again, it depends on the context in
8 which it's being used. So if we're referring to
9 something like a media playback system, then in that
10 particular case it's something that is used to play 11:54:40
11 back multimedia.

12 The word "media" could mean other things, but
13 in the context of the way it's used in the '615 and
14 '033 patents, the media playback system is referring
15 to something that is used to play back multimedia. 11:55:01

16 Q In the networking field in 2011, is the plain
17 and ordinary meaning of media and multimedia the
18 same?

19 A Again, there are -- it depends on the context
20 in which the phrase -- the terms are used. So in 11:55:20
21 the context of the '615 and the '033 patents,
22 they're using the phrase "media playback" or "media
23 system" or "media playback system" -- I think that's
24 the term that's used -- to mean some device that can
25 be used to play multimedia content. 11:55:40

1 In a different context, the term could
2 potentially mean something else, but in the way it's
3 used in the patent, it's clear from the context that
4 it's referring to the media playback system and
5 that's used to play multimedia. 11:55:56

6 Q Why are they different words, media and
7 multimedia, if they mean the same thing?

8 A Why are they different words? People use
9 synonyms all the time. I'm not sure what you mean,
10 why are they different words. 11:56:26

11 Q Well, let's talk specifically in the context
12 of the claims in the '615 and '033 patent. Why did
13 they use "media" in some places and "multimedia" in
14 other places?

15 MR. SULLIVAN: Object to the form of the 11:56:39
16 question.

17 THE WITNESS: I don't know. I didn't have a
18 hand in drafting the patent, so I don't know what
19 they were thinking. I don't see the terms defined
20 in a way where they mean something different. 11:56:54

21 BY MR. JAFFE:

22 Q Can you identify any parts of the
23 specification of the '615 or '033 patents or the
24 prosecution history that equates media and
25 multimedia? 11:57:10

1 A I'm not sure what you mean. They use the
2 terms -- they talk about multimedia playback. They
3 talk about media playback. I see no distinction
4 made between them.

5 They don't say when we use the word "media," 11:57:30
6 we mean such and such. When we use the word
7 "multimedia," we mean something else. I think
8 they're just using them -- one as a shorthand for
9 the other.

10 Q And where do the specifications or intrinsic 11:57:44
11 record, more broadly the '615 or '033 patents, state
12 that it's using media and multimedia as shorthand
13 for each other?

14 A Like I said, I think a person of ordinary
15 skill in the art at the time of the invention who 11:58:05
16 read the patent would have seen that they were using
17 the terms interchangeably. Sometimes they say,
18 "multimedia." Sometimes they say, "media." Just
19 the way that they're using it.

20 Q Can you identify any specific parts of the 11:58:26
21 specification that equate media and multimedia?

22 A So in reading the specification, there's a
23 continuous reference to playback systems, which are
24 either referred to as media playback systems or
25 multimedia playback systems. There does not appear 11:58:49

1 to be any distinction in the specification or the
2 prosecution history saying that when the phrase
3 "media playback" is used, it means something
4 different from "multimedia playback." So as far as
5 I can tell, they're just using those two terms to 11:59:08
6 mean essentially the same thing.

7 It's like saying why do you use the word
8 "identifier" sometimes versus ID somewhere else.
9 One is sort of shorthand for the other. And in this
10 case they're using media and multimedia -- I don't 11:59:26
11 see a distinction that is made. And so I don't
12 think that that would have been something that would
13 have been -- it certainly wasn't confusing to me
14 when I read the patent. I knew what they were
15 talking about if they were talking about systems 11:59:38
16 that had media playback systems that played back
17 multimedia content.

18 Q Have you ever heard the terms "media" and
19 "multimedia" used to mean different things?

20 A Yes, but not in the context of the patent. 11:59:53

21 Q But generally in your experience in your
22 field, you've heard the terms "media" and
23 "multimedia" used to mean different things; is that
24 fair?

25 A As with everything, context is key. If 12:00:10

1 you're talking to someone who is a newspaper
2 publisher from the 1970s or an artist, if you talk
3 to Andy Warhol and you asked Andy Warhol what media
4 was, Andy Warhol's definition would probably be very
5 different. It would probably be like a painting. 12:00:34
6 Or if you asked a newspaper publisher, it would be a
7 newspaper.

8 But in the context of the '615 and '033
9 patents, a person of ordinary skill in the art would
10 have understood that media and multimedia were being 12:00:46
11 used in the same way.

12 Q I appreciate that answer. My question was a
13 little bit different. So I'd appreciate it if you
14 please listen to my question.

15 Dr. Schmidt, in your experience in your 12:00:58
16 field, have you heard the terms "media" and
17 "multimedia" used to mean different things?

18 MR. SULLIVAN: Object to the form of the
19 question. Vague.

20 THE WITNESS: Again, when you say in my 12:01:14
21 field, I wear a lot of different hats. So I don't
22 really know how to answer that question when you say
23 my field. What does that mean?

24 BY MR. JAFFE:

25 Q Well, what field do you work in? 12:01:27

1 A Oh, gosh. Many fields. I have at least five
2 or six different things that I do generally. The
3 same name, the same phrase will be used in wildly
4 different ways, depending on how we're -- what I'm
5 doing at the time. 12:01:47

6 Q How would you generally describe the field
7 that you work in?

8 A Well, I'm a computer science professor. That
9 is one thing I do. I'm also the director of a data
10 science institute, which isn't quite the same thing 12:02:01
11 as computer science. I'm also the associate provost
12 for research, so that is a very different role.

13 I do consulting and expert witnessing, which
14 is not the same as any of those other three things.
15 I do work with other groups. In various parts of my 12:02:21
16 past life, I've served as the chief technology
17 officer for several different companies.

18 So that's why it's hard to answer that
19 question in my field, because I have many different
20 expertise. 12:02:38

21 Q I appreciate that.

22 So in your field as a computer science
23 professor, have you heard the terms "media" and
24 "multimedia" used to mean different things?

25 A Again, in the context of this patent, they 12:02:53

1 mean the same thing. I'm not sure what relevance it
2 is if I have heard them used in a different way, in
3 a different context, because I'm not opining -- my
4 declarations are not opining about my general use of
5 the terms. It's referring to them in the context of 12:03:11
6 the '615 and '033 patents. So I'm not really sure I
7 understand your question.

8 Q I totally understand you may disagree that --
9 whether something is relevant or not to your
10 opinion. And I appreciate that. But for purposes 12:03:26
11 of exploring your opinions and the disputes here,
12 you know, I'm going to ask the question again.

13 Is that all right with you, sir?

14 A Sure.

15 Q In your field as a computer science 12:03:39
16 professor, have you heard the terms "media" and
17 "multimedia" used to mean different things?

18 A In my -- again, the hard part of answering
19 that question is I don't understand the scope of the
20 question. 12:04:04

21 So in my role as a computer science
22 professor, we have people who post on social media,
23 like Facebook or Twitter. So is that -- are you
24 asking is that use of the word "media" in social
25 media the same as multimedia? 12:04:22

1 Q Would it be helpful if I said in your
2 experience as a computer science professor, have you
3 heard the terms "media" and "multimedia" used to
4 mean different things?

5 A Again, keeping in mind that my scope of my 12:04:43
6 assignment was to look at the '615 and '033 patents
7 where it's my opinion that multimedia and media are
8 used in the same ways, there's other ways that
9 people use those terms in computing. For example,
10 social media, which might or might not be 12:05:03
11 multimedia. It depends on the social media
12 platform.

13 But I don't think that in the context of the
14 way in which the terms are being used in this
15 patent, they are being used synonymously. They're 12:05:16
16 used -- like almost any word, if you pull it out of
17 context and look at it in isolation, it can mean
18 very different things.

19 If you're someone who is familiar with the
20 way that processors work, they execute instructions. 12:05:34
21 If you're someone who is a -- someone who is a judge
22 or police officer, you execute -- you execute
23 orders. Or you're military officer, you execute
24 orders. So the word "execute" has different
25 meanings in different contexts. 12:05:58

1 So I'm just having a hard time understanding
2 how to compare those words. Because in the context
3 I'm offering opinions on, in the context of the '615
4 and '033 patents, they are being used in a similar
5 way. But like any word, it can be used different 12:06:13
6 ways in different contexts.

7 Q Are you aware of any playback systems that
8 can play only in particular media formats?

9 A Yes. Although that does not appear to be
10 what they were referring to in the context of the 12:06:42
11 patents at issue here.

12 Q For example, you're aware of playback systems
13 that can just play back audio, right?

14 A I'm aware of that. Although, again, that's
15 not something that I -- I think that's -- what is 12:06:53
16 being disclosed in the patents is using the term a
17 different way.

18 Q Are you aware of playback systems that can
19 play just RF data?

20 A In the context of what? 12:07:10

21 Q I'm asking if you're aware of playback
22 systems that can play back just RF data? Any
23 context.

24 A I recall reading Dr. K -- this is described
25 on paragraph 91 of my reply report where I describe 12:07:37

1 how Dr. K mentions there was a playback system that
2 was an RF spectrum analyzer that records and plays
3 back RF data. I remember reading that. I do not
4 have firsthand knowledge of that type of system.

5 But, as I say in my report, a POSITA would 12:07:58
6 not look at that as an example of a media playback
7 system that was being disclosed in the '615 and '033
8 patents.

9 Q Your opinion is that this kind of what you
10 call a typographical error is kind of immediately 12:08:22
11 apparent from reviewing the specification and the
12 claims; is that fair?

13 A I think -- well, I conducted an analysis
14 based on looking at various sources as discussed in
15 my reports. So I looked at the specs or the spec. 12:08:41
16 I looked at the claims. I looked at the prosecution
17 history and, you know, I had to do the analysis to
18 come to the conclusion, but it didn't strike me
19 that -- as I read it and I recognized that the term
20 didn't appear -- as I described in the opening 12:09:03
21 report and the reply -- opening declaration and
22 reply declaration, it was clear after reading the
23 material that -- especially the specification and
24 the claims -- that the term was not given any
25 particular meaning and did not appear consistent 12:09:19

1 with other things that were in the spec, other
2 things in the claims.

3 So therefore it was obvious after reading
4 it -- I don't know whether immediately obvious. If
5 immediate means before even reading anything I came 12:09:35
6 to a conclusion, the answer is no. So I'm not sure
7 what immediate means in this context.

8 Q After you reviewed the material, you think it
9 was obvious that this is an error; is that fair?

10 A After looking at the specification and 12:09:54
11 looking at the claims and thinking about what was
12 being disclosed and the fact that there was no
13 effort or no description anywhere in the
14 specification of the claims of limiting the media to
15 a particular media, it seemed clear that that was 12:10:11
16 just something that had been added inadvertently
17 along the way, I think as I mentioned before, to
18 perhaps in hasty attempt to maintain antecedent
19 basis. And, therefore, it didn't provide any
20 meaning. 12:10:34

21 And so it doesn't make the -- in my opinion,
22 it doesn't make the claims indefinite. It just was
23 something that was a typographical error.

24 Q Are you aware of a process where a patentee
25 can request a certificate of correction? 12:10:46

1 A I've worked in cases before where there were
2 certificates of correction applied for patents. I'm
3 not familiar with that process.

4 Q Are you aware of whether Sonos has sought a
5 certificate of correction to correct this error 12:11:06
6 regarding a media particular playback system?

7 MR. SULLIVAN: I'll object to the form of the
8 question.

9 THE WITNESS: I'm not aware.

10 BY MR. JAFFE: 12:11:19

11 Q And did Sonos -- upon receiving the notice of
12 allowance during prosecution, did Sonos request any
13 changes to the issued -- the as-issued claims to
14 correct this error?

15 A I don't recall. I'm not sure. 12:11:39

16 Q Let's go to Exhibit 2 and Roman numeral 10,
17 starting at paragraph 100, where your declaration
18 addresses the term "wherein the instruction
19 comprises an instruction."

20 Do you see that? 12:12:50

21 A Yes. Sorry, is this Exhibit 1 or 2?

22 Q Exhibit 2.

23 A All right. Let me get there.

24 Okay. I'm there.

25 Q And here in paragraph 101, you refer to 12:13:08

1 independent claims which discuss transmitting an
2 instruction.

3 Do you see that?

4 A I do.

5 Q Can you give me any examples of that 12:13:29
6 instruction?

7 A So if I understand your question, examples of
8 that instruction, what that means -- let me -- can I
9 start my answer over again? Can you hear me?

10 Q I can hear you. I'll withdraw the question 12:14:11
11 and I'll ask it again.

12 Is that all right, sir?

13 A Please.

14 Q Here in paragraph 101 of Exhibit 2, there's a
15 reference to transmitting an instruction in 12:14:25
16 independent Claims 1 and 12 of the '033 patent.

17 Do you see that?

18 A I do.

19 Q Can you give me examples of what that
20 instruction includes? 12:14:38

21 A Sure. So dependent Claims 2 and 3 give
22 examples of what that instruction or what that
23 instruction could do. Dependent Claim 2 describes
24 how that instruction is used to -- it's something
25 that is given to the cloud-based computing system 12:15:00

1 associated with the media service to provide the
2 data identifying the next one or more media items to
3 give a playback device for use in retrieving at
4 least one media item from the cloud-based computing
5 system associated with the cloud-based media system. 12:15:20

6 So that's an example of what the instruction
7 is. It's elaborating on what is disclosed in that
8 element in Claim 1.

9 And then Claim 3 likewise goes on and
10 explains how the instruction comprises or is 12:15:34
11 characterized by an instruction for the cloud-based
12 computing system associated with the cloud-based
13 media service to provide the at least one media item
14 to the given playback device.

15 Q The examples you just gave, those are 12:15:51
16 examples of what the instruction from Claims 1 and 2
17 itself would include?

18 A Well, okay. Sorry. When you say Claims 1
19 and 2 -- so Claim 1 --

20 Q Sorry. Claims 1 and 12. I misspoke. 12:16:05

21 A Okay. Sorry.

22 So Claim 1 just says there's an instruction
23 and that instruction will -- what Claim 1 says is
24 that instruction will be for the at least one given
25 playback device to take over responsibility for the 12:16:27

1 playback of the remote playback queue from the
2 computing device. So that's -- that's where the
3 first description of the instruction occurs.

4 And then dependent Claims 2 and 3 go further
5 and elaborate what is meant by that. 12:16:49

6 Q What is an instruction as that term is used
7 in the claims of the '033 patent?

8 A Let's see. I describe that in my report.
9 Let me go look at that.

10 So if you take a look in my reply declaration 12:17:35
11 in paragraph 106, it says:

12 "A POSITA would understand the
13 term 'instruction' recited in the
14 larger phrase" -- and this is in
15 quotes -- 'transmitting an instruction 12:18:01
16 for at least one given playback device
17 to take over responsibility for
18 playback of the remote playback queue
19 from the computing device,' close
20 quote, "found in Claims 1 and 12, is 12:18:11
21 referring to a communication
22 transmitted by the claimed computing
23 device over a data network that
24 instructs the recipient to take one or
25 more actions." 12:18:25

1 So that's where I describe what the term
2 "instruction" means in the context of that claim
3 element.

4	Q Does instruction mean communication in the	
5	context of the claims of the '033 patent?	12:18:39

6 A Well, instruction is -- it's a communication
7 that is transmitted. So there's a communication
8 that takes place and the communication is
9 transmitted over the computing device or by the
10 computing device -- sorry -- over the data network 12:19:05
11 and instructs the recipient to take some action or
12 actions.

13 Q How would one of ordinary skill know whether
14 they're looking at an instruction or not?

15	A	I'm not sure what you mean.	12:19:30
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16 Q Can you give me some examples of instructions
17 in the context of the claims of the '033 patent?

18 A Yes. The -- as I mentioned before, Dependent
19 Claims 2 and dependent -- sorry -- Dependent Claim 2
20 and Dependent Claim 3 both give an example of what 12:19:54
21 this instruction does.

22 Q So in the example that you just mentioned,
23 what would be transmitted? What is the thing that
24 would be transmitted in the example that you just
25 gave? 12:20:11

1 A Whatever -- what is transmitted is whatever
2 is required to instruct the recipient to do the
3 action that is disclosed in further detail in
4 Dependent Claim 2 and Dependent Claim 3.

5 Q And can you gave me an example of an 12:20:32
6 instruction that is actually transmitted, in your
7 opinion?

8 A There could be various instructions that
9 could be implemented several different ways.

10 Q Okay. Can you give me an example of how you 12:20:47
11 would implement the instruction that is transmitted
12 in Independent Claims 1 and 12 of the '033 patent?

13 MR. SULLIVAN: Object to the form of the
14 question.

15 THE WITNESS: So without loss of generality, 12:21:02
16 in other words, there could be other ways to do it,
17 the instruction could be a message. It could be a
18 sequence of messages. It could be an update through
19 a database. There could be various ways to instruct
20 from one device -- in this case it's a computing 12:21:18
21 device, such as a smart phone, for example, and it
22 could instruct the, say, the cloud-based computing
23 system to do various things. It could pass a
24 message. It could pass a couple of messages. Or,
25 like I said, it could send a field in a database 12:21:40

1 that was shared. There are various ways for one
2 computer to instruct another. And those would have
3 been understood by a person of ordinary skill in the
4 art at the time of the invention as a way for
5 different participants in a network environment to 12:21:56
6 communicate.

7 BY MR. JAFFE:

8 Q Can you give me an example of what data or
9 information would be included in an instruction, as
10 that term is used in Claim 1 or 12 of the '033 12:22:11
11 patent?

12 MR. SULLIVAN: Object to the form of the
13 question. Beyond the scope of the claim
14 construction.

15 THE WITNESS: So, again, if you take a look 12:22:29
16 at Claim 2, it says that the instruction comprises
17 an instruction where the word "comprises," as I
18 understand from talking to counsel, could be
19 interpreted as meaning includes or containing or
20 characterized by. It's just elaborating on what is
21 meant by instruction. It could be an instruction
22 for the cloud-based computing system that's
23 associated with the media service to provide data
24 identifying the next one or more media items.

25 So data identifying in this context could be 12:22:59

1 something like URL or URI, uniform resource locator
2 or a uniform resource identifier, that could be used
3 by the given playback device to retrieve the media
4 item from the cloud-based computing system. So that
5 would be an example of something that could be 12:23:20
6 communicated in the instruction.

7 There could be other information, of course,
8 as well, some kind of request or command indicating
9 what to do. And there could be information as well.
10 And a person of ordinary skill in the art would have 12:23:32
11 understood that that is a very common way for
12 different devices in a networked environment
13 connected by a data network to communicate with each
14 other.

15 BY MR. JAFFE: 12:23:44

16 Q Thank you.

17 In your opinion, is what is described in
18 Claim 1 or 12, the instruction that is transmitted
19 that we've been referring to, can that be one
20 instruction or multiple instructions? 12:24:12

21 A I'm not really sure whether there's a
22 legal -- from a legal point of view whether the word
23 "instruction" could be more than one, one or more.
24 I'm sure there is case law that sheds light on that.
25 I'm not familiar with that case law, but, you know, 12:24:37

1 the instruction to me is something that, as I
2 mentioned earlier in my response to your question,
3 it could be communicated in various ways. It could
4 be communicated by a message. It could be
5 communicated by a group of messages. 12:24:56

6 To some extent, whether it's one message or a
7 group of messages to carry out the instruction
8 really probably depends on the creativity of the
9 person who is applying the invention, and other
10 factors having to do with things like security and 12:25:11
11 so on.

12 Q For purposes of the analysis that you did
13 regarding the term "wherein the instruction
14 comprises an instruction," the phrase "the
15 instruction," did you consider that to be one 12:25:32
16 instruction or multiple instructions?

17 A So taking a look at my reply declaration in
18 paragraph 103, I think the point there is, you know,
19 it could be a single instruction and it would still
20 make sense. It potentially could be multiple 12:26:00
21 instructions, it would still make sense.

22 The key point is that the phrase "instruction
23 comprising an instruction" is simply adding
24 additional characteristics in the dependent claim
25 that modify or expand upon, I guess is a better 12:26:17

1 term -- modify is the wrong term -- expand upon or
2 elaborate upon what's recited in the independent
3 claims.

4 Q Okay. So your analysis didn't assume one way
5 or the other whether the instruction in Independent 12:26:33
6 Claims 2 and 13 refer to one instruction or multiple
7 instructions; is that fair?

8 A Again, I was -- I was responding to Dr. K's
9 assertion that the phrase "instruction comprising an
10 instruction" was indefinite. And my analysis was 12:26:58
11 looking from the point of view that instruction
12 comprising an instruction or comprised by an
13 instruction was just specifying these additional
14 characteristics or elaborating upon in the dependent
15 claim or claims what was already disclosed in 12:27:19
16 independent claims.

17 And so whether or not instruction means one
18 or instruction means many, the scope of my analysis
19 was really looking to see whether I believed the
20 person of ordinary skill in the art would have 12:27:34
21 understood what that term meant. That's what I was
22 focusing on.

23 Q Is it possible to have one instruction?

24 A Well, it depends on what we mean by an
25 instruction, right? So I think that's actually a 12:27:47

1 great question here.

2 So if you take a look, the instruction that
3 we're talking about -- if you go back to Independent
4 Claim 1, for example, it says that the instruction
5 configures the given playback device to do a bunch 12:28:06
6 of things. It doesn't say that there is only one
7 instruction that is sent to do a bunch of stuff. It
8 just says that the instruction is used to configure
9 some subsequent things to happen.

10 So I guess it depends on how the question is 12:28:23
11 phrased as to whether there's just one instruction.
12 And the question is one instruction to do what. In
13 my reading of the independent claim, the instruction
14 as transmitted is intended to ensure that the given
15 playback device takes over responsibility from -- 12:28:43
16 for the playback of the remote playback queue from
17 the computing device. That's what the instruction
18 is doing. And it's doing that by configuring the
19 playback device such that several other things can
20 then happen. 12:29:03

21 Q Thank you.

22 Let me ask you just generally. Generally in
23 the context of computers, can -- is it possible to
24 have a single instruction?

25 A I'm not quite sure what you mean. Like what 12:29:21

1 kind of instruction?

2 Q Well, what is your understanding of the plain
3 and ordinary meaning of instruction in the context
4 of computing systems?

5 MR. SULLIVAN: Object to form of the 12:29:36
6 question.

7 THE WITNESS: Without more context, that --
8 there's no easy way to answer that question.
9 Instruction means different things in different ways
10 at different levels at different parts of computing. 12:29:48

11 Computing is a big discipline and the word
12 "instruction" can mean different things. The
13 question is -- the question I was looking at was
14 does the word "instruction" in the phrase "an
15 instruction that comprises an instruction," does 12:30:04
16 that make any sense. That's how I was looking at
17 instruction.

18 Now, I recognize that instruction appears in
19 other places and it's used in other ways, so I don't
20 know if there is one way to answer what instruction 12:30:19
21 means.

22 BY MR. JAFFE:

23 Q Let's go ahead and look at Exhibit 4, which
24 is the '033 patent.

25 A Okay. 12:30:38

1 Q And in particular Claim 1.

2 Do you see Claim 1?

3 A Yes.

4 Q The fourth line down from where it starts, it

5 refers to "program instructions." 12:30:58

6 Do you see that?

7 A I do.

8 Q What are program instructions?

9 A So I think I describe that in my report or
10 declaration -- sorry, my reply declaration. 12:31:09

11 Q And if you -- sorry to interrupt, but if you
12 don't mind, please, saying what you're looking at
13 when you're looking at things, for the record.

14 A Sure. Absolutely.

15 So I'm looking at my reply report and looking 12:31:29
16 at the portion describing program instructions. And
17 in particular I'm looking in paragraph 106.

18 So program instructions are one type of
19 instruction that can be stored in a device's memory
20 and executed by the device's processor. So that's 12:32:03
21 one type of an instruction.

22 An example there might be binary machine
23 code, for example, would be an example of a program
24 instruction. And so that's one example. That's the
25 way that people typically use program instructions 12:32:25

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1 as I understand it in patents that relate to
2 software.

3 Q So a program instruction is a form of an
4 instruction; is that fair?

5 A In the context of the way the phrase is used 12:32:44
6 here in Claim 1, program instruction -- program
7 instructions are referring to a form of instruction
8 that is stored in nontransitory computer readable
9 medium, that when executed by the processor causes
10 the computing device to perform functions. 12:33:08

11 Q Thank you for reading Claim 1 to me.

12 So in terms of the instruction that is
13 transmitted in Claims 1 and 12 of the '033 patent,
14 can that be a program instruction?

15 A A POSITA -- as I say in paragraph 106 in my 12:33:28
16 reply declaration, a POSITA, a person of ordinary
17 skill in the art, would readily understand the term
18 "instruction" recited in the larger phrase which
19 talks about transmitting instruction, is referring
20 to a communication transmitted by the claimed 12:33:48
21 computing device over a data network that instructs
22 the recipient to take one or more actions.

23 Q Thank you for that, but I'm sorry to say, I
24 don't think that answers the question I posed.

25 Apologies if I was unclear. 12:34:06

1 My question is, is the instruction that's
2 transmitted in Claims 1 and 12 of the '033 patent,
3 can that be a program instruction?

4 A The way the word "program instruction" is
5 used earlier, I believe is referring to something 12:34:30
6 like, you know, byte code or something like object
7 code, binary code that is executable by the device's
8 processor.

9 The instruction that is described here is
10 used in a slightly different way and it's used to 12:34:52
11 refer to a communication that is transmitted in
12 order to be able to instruct the recipient to take
13 the actions that are disclosed in Claims 1, 2, and
14 3.

15 So the word "instruction" there is being used 12:35:07
16 in a way that a POSITA would understand was not the
17 same as program instructions. Otherwise, I assume
18 they would have used the word "program instructions"
19 later if they meant program instructions as they had
20 defined them earlier. 12:35:24

21 Q So the instructions transmitted in the claims
22 of the '033 patent cannot be a program instruction,
23 correct?

24 MR. SULLIVAN: Object to the form of the
25 question. 12:35:38

1 THE WITNESS: The instruction that's
2 described in -- without the word -- without the
3 prefix "program" in front of it, that instruction is
4 being used to describe something that is -- would be
5 understandable by a POSITA to relate to something 12:35:58
6 that is communicating from one device, the computing
7 device, over a data network to some other device or
8 devices without any limitation. And that
9 instruction is not meant to mean the same thing that
10 program instruction means, which program 12:36:22
11 instruction, as I mentioned before, would be
12 something that would be potentially things like byte
13 code or -- like a byte code, a program instruction.
14 A program instruction would be something in byte
15 code or binary code that said, "Move this memory 12:36:37
16 location to a register" or "Add this memory location
17 to another memory location and store it someplace
18 else." That's -- when I read "program instruction,"
19 that are stored in a device's memory and executable
20 by the device's processor, I think the POSITA would 12:36:56
21 understand that type of instruction, that program
22 instruction, to mean byte code or binary code.

23 Whereas the instruction that is referred to
24 here is referring to a communication that is
25 transmitted from one computing device over a data 12:37:11

1 network to a recipient.

2 BY MR. JAFFE:

3 Q Thank you.

4 It's about 12:37 here on the Pacific Coast.

5 Shall we break for lunch? 12:37:27

6 A Sure.

7 THE VIDEOGRAPHER: We're off the record at

8 2:37 p.m.

9 (Lunch recess.)

10 THE VIDEOGRAPHER: We are on the record at 01:21:20

11 3:21 p.m.

12 BY MR. JAFFE:

13 Q Welcome back, Dr. Schmidt.

14 A Thank you.

15 Q I want to turn back to your reply 01:21:30

16 declaration. And in particular I want to direct you

17 to paragraph 102.

18 A Okay. I'm there.

19 Q You said you have been informed that the

20 transitional term -- and it goes on from there. 01:22:05

21 When you say you've been informed, you're

22 saying informed by counsel?

23 A Yeah. If you look at paragraph 11, it has

24 a -- talks about being informed by counsel about

25 legal standards. And then if you take a look at 01:22:27

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1 paragraph 15, it says:

2 "I've been informed by counsel
3 about legal standards relevant to the
4 transitional claim term
5 comprising/comprises."

01:22:39

6 Q And what's described in paragraph 102 is the
7 understanding that you used in forming your opinions
8 regarding the term "wherein the instruction
9 comprises an instruction," correct?

10 A That's correct.

01:23:08

11 Q Okay. Did you provide any analysis or
12 opinions that didn't include this understanding
13 stated here in paragraph 102? And I'm only
14 referring to the term "wherein an instruction
15 comprises an instruction."

01:23:35

16 A I'm not quite sure what you mean.

17 Q Fair. Let me come at it a different way, try
18 to ask a clearer question.

19 Can a single instruction include another
20 instruction?

01:24:25

21 A In what context?

22 Q In the context of the claims of the '033
23 patent.

24 A I don't -- well, let's see. It doesn't seem
25 unreasonable to me that an instruction could

01:24:59

1 comprise other instructions. It could be a
2 composite construction. Sorry, composite
3 instruction.

4 But in my understanding of this particular
5 claim element, I think it's clear just from the 01:25:18
6 point of view of looking at it in terms of how I
7 describe it in my declaration, my reply declaration,
8 that, as I say, somewhere around there -- let me see
9 where I said this.

10 So in paragraph 104, I say that: 01:25:53

11 "Indeed it would be no different
12 from a situation in which an
13 independent claim recited 'a hat' and
14 a dependent claim recited 'wherein the
15 hat comprises a hat that is red.'" 01:26:08

16 So the way I was looking at it from the point
17 of view of my analysis was from a perspective, as I
18 said in paragraph 102, that "comprises" is
19 synonymous with including, containing, or
20 characterized by. And so wherein an instruction 01:26:23
21 comprises -- "wherein an instruction that comprises
22 an instruction" is just further elaborating or
23 specifying additional characteristics. That's the
24 basis that I was doing my analysis.

25 Q Can the instructions of the '033 patent be 01:26:44

1 computer code?

2 A The instructions -- the instructions that
3 we're describing here in the context of instructions
4 comprising instructions and so on, those could
5 certainly be implemented by -- by computer code, 01:27:03
6 yes.

7 Q And just to go to paragraph 104, the hat
8 analogy that you mentioned, can a single hat contain
9 a hat?

10 A If you ever saw The Cat in the Hat, if you 01:27:25
11 read the book The Cat in the Hat, you can have all
12 kinds of things under your hat, including other
13 hats.

14 I didn't look at it from that point of view.
15 But I don't suppose there's a reason why a hat 01:27:39
16 couldn't contain a hat, but, as I say, I was -- my
17 analysis that is put forth here in this reply
18 declaration is analyzing it from the point of view
19 that "comprises" or "comprising" means includes or
20 including, contains or containing, or is 01:27:59
21 characterized by, and so on. So that it's just
22 providing additional characteristics or further
23 elaborating on what is meant by the term
24 "instruction."

25 Q To use your analogy here, if a single hat 01:28:14

1 includes another hat, is that one hat or two hats?

2 A Like I said, the analysis that I performed
3 was looking at it from the point of view of the
4 "instruction comprising an instruction" being an
5 elaboration or specifying additional 01:28:42
6 characteristics. I was -- I would have to spend
7 some time thinking about how many hats there would
8 be.

9 Q It's an illogical inconsistency, right? A
10 single hat can't comprise another hat because 01:28:57
11 otherwise there would be two hats, right?

12 MR. SULLIVAN: Object to the form of the
13 question.

14 THE WITNESS: Obviously it all depends on --
15 I'm not sure I would agree with your statement, but 01:29:06
16 I haven't done that analysis for the purpose of this
17 report, this declaration. So I would have to sit
18 down and think about it.

19 Off the top of my head, it seems that it all
20 depends on your perspective as to whether there is 01:29:19
21 one hat or two hats.

22 MR. JAFFE: I'm going to mark another
23 exhibit. This is going to be Schmidt Exhibit 5.

24 (Exhibit 5 was marked for identification
25 electronically and is attached hereto.) 01:30:14

1 BY MR. JAFFE:

2 Q Let me know when you see it, Dr. Schmidt.

3 A Okay. I'm refreshing the website.

4 There we go. I see it. Okay, I've got it.

5 MR. JAFFE: One second. 01:30:40

6 BY MR. JAFFE:

7 Q This is a document downloaded off the
8 internet entitled, "For Loop C++ with example."

9 Do you see that?

10 A I do. 01:30:52

11 Q Do you see there's a section here -- well,
12 let me ask you, before I do that, are you familiar
13 with C++?

14 A I am.

15 Q Can you read C++? 01:31:01

16 A Yes.

17 Q Okay. Do you see the second kind of section
18 in here, it says, "Syntax of for loop"?

19 Do you see that?

20 A I do. 01:31:10

21 Q And then there's one, two, three -- four
22 lines of code.

23 Do you see that?

24 A Actually, there are not four lines of code.

25 Q Well, there's the word "for," there's a 01:31:26

1 bracket, "C++ statement," and then the second
2 bracket?

3 A I see that there are four lines. That's not
4 code.

5 Q What is it? 01:31:35

6 A It appears to be some notation that describes
7 various elements and the roles that they play in a
8 for loop, but it's not code.

9 Q Okay. Then why don't we go down to the page
10 3 of 7. It says: 01:31:58

11 "Example of a Simple For Loop in
12 C++".

13 A Yes.

14 Q Would you agree what is listed there is code?

15 A Yes. 01:32:09

16 Q Okay. And so, again, we are in Exhibit 5 on
17 page 3, there's an example of For Loop. Is the code
18 shown on page 3, is that one instruction, two
19 instructions, three instructions, four instructions?

20 How many -- well, let me ask a better question. 01:32:32

21 Can I start over? Is that all right with
22 you, Dr. Schmidt?

23 A Please.

24 Q Looking at Exhibit 5, in particular page 3,
25 is the code listed here one instruction or multiple 01:32:42

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1 instructions?

2 A What -- what kind of instructions are you
3 interested in discussing?

4 Q As that term is used in the claims of the
5 '033 patent. 01:32:56

6 A Well, so as we described earlier, the claims
7 in the '033 patent are dealing with communication --
8 well, let me rephrase that. Sorry.

9 The -- there are several uses of the word
10 "instruction" in the '033 patent. Which one are you 01:33:10
11 referring to?

12 Q Is it your opinion that the word
13 "instruction" has different meanings in the claims
14 of the '033 patent?

15 A As we discussed earlier, there's several 01:33:21
16 different places that talk about instructions. The
17 first one is -- let's see --

18 Q Again, if you can also -- sorry, I don't mean
19 to interrupt, but if you could also just mention
20 what you're looking at when you -- 01:33:44

21 A Oh, sorry. I'm looking at the claims for the
22 '033 patent.

23 Q How many different meanings does the word
24 "instruction" have in the claims of the '033 patent?

25 MR. SULLIVAN: Just for the record, I think 01:34:01

1 the witness said "program instructions" in his
2 earlier answer and it got cut off by Counsel.

3 THE WITNESS: I did. I said program -- yeah,
4 so the word "program instructions" shows up -- I
5 haven't read the whole claim, but what I see on my 01:34:17
6 screen is that the word "program instructions" as a
7 term, "program instructions" shows up in towards the
8 beginning of Claim 1. And those are the ones that
9 are stored in the memory and executed by the
10 processor and so on. 01:34:34

11 And then later, as we talked about earlier,
12 there's use of the term instruction and this time
13 we're talking about transmitting an instruction.
14 And in that context we talked earlier about
15 transmitting an instruction could be implemented 01:34:54
16 various ways. But the key there is transmitting.

17 And what we see here in the For Loop example
18 has nothing to do with transmitting. It's a
19 different -- it's entirely different. That's why I
20 was asking the question what do you mean by 01:35:12
21 instruction in this context?

22 BY MR. JAFFE:

23 Q I'm not asking you about anything being
24 transmitted. I'm asking you, is what we're looking
25 at in Exhibit 5 an instruction? 01:35:21

1 MR. SULLIVAN: Object to the form of the
2 question.

3 THE WITNESS: I have to ask you for more
4 context. What -- that's why I asked you the
5 question. What kind of instruction are you looking 01:35:35
6 for? Are you looking for program instructions?
7 Because this does not show program instructions as
8 the term used in the '033 patent.

9 BY MR. JAFFE:

10 Q Okay. Well, let's start with that. Maybe 01:35:48
11 that will be easier.

12 Does what we're looking at in Exhibit 5, page
13 3, is the code on this page, is that an example of a
14 program instruction?

15 A Not the way it's described in the '033 01:35:58
16 patent.

17 Q Okay. Now, is what is shown here on page 3
18 of Exhibit 5 an instruction?

19 A I don't know what -- how you mean that term,
20 "an instruction." 01:36:20

21 Q Are you familiar with the term "instruction"?

22 A As we talked about before, the word
23 "instruction" has different meanings in different
24 contexts. The way it was used in the '033 patent,
25 as we discussed earlier, there were program 01:36:36

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1 instructions, which were capable of being stored in
2 memory and executed on the processor or by a
3 processor, and then there was an instruction that
4 was transmitted. And so what we're looking at here
5 is neither of those types of instructions. 01:36:54

6 Q Do you understand the word "instruction"
7 apart from the word "transmitted" when we're talking
8 about transmitted -- when we're talking about
9 instructions, not program instructions, in the
10 context of the '033 patent? 01:37:07

11 MR. SULLIVAN: Object to the form of the
12 question.

13 THE WITNESS: In the context of a POSITA
14 reading the '033 patent, transmitting instructions
15 has a particular meaning that is not conveyed -- 01:37:25
16 again, as we've talked about several other times
17 before, taking words out of context and trying to
18 define them and then trying to come up with
19 definitions by just taking sort of arbitrary
20 meanings of those terms and rearranging them 01:37:43
21 doesn't -- isn't the way that a POSITA would look at
22 this, look at the claims or look at the patent.

23 So what you're showing me here, as I think I
24 say in my report, if you take a look at paragraph
25 105 in my reply declaration, I say: 01:37:59

1 "I fail to see the relevance of
2 Dr. K's discussion of a block of code,
3 lines of code, one source code
4 function or method, one for loop and
5 method calls, which suggests to me 01:38:16
6 that Dr K. does not have a firm grasp
7 of the claims or the teachings of the
8 '033 patent."

9 The questions that you're asking to me don't
10 make sense in that context. That is not what was 01:38:25
11 meant and a POSITA would not have understood the
12 term "transmitting instructions" to mean the things
13 that are being pointed to here. And that is said
14 very clearly in paragraph 105 and paragraph 106 in
15 my reply declaration. 01:38:40

16 BY MR. JAFFE:

17 Q So what we're looking at there in Exhibit 5,
18 the example of a for loop, is not an instruction?

19 A A person of ordinary skill in the art would
20 understand a for loop to be a statement. And, in 01:38:53
21 fact, if you look at the -- if you take a look at
22 the content that appears in the body of the for
23 loop, it says:

24 "This statement would be executed
25 repeatedly." 01:39:05

1 So that's why I said a person of ordinary
2 skill in the art would not say an instruction. They
3 would say this is a statement, the for loop is a
4 statement.

5 BY MR. JAFFE: 01:39:16

6 Q Just to be clear, are -- I want to make sure
7 I'm not missing the distinction you're making.

8 Is what we're looking at on page 3 of
9 Exhibit 5, the example of a for loop, an instruction
10 or not? 01:39:30

11 A What we're looking at, as it actually says on
12 this page in Exhibit 5, what we're looking at is a
13 for loop, and a for loop is a statement.

14 Q I appreciate that, sir, but that's not
15 actually answering the question that I'm asking. I 01:39:44
16 apologize if I'm being unclear.

17 Is what we're looking at on page 3 of the
18 exhibit, Exhibit 5, an instruction or not?

19 MR. SULLIVAN: Object to the form of the
20 question. Asked and answered. 01:39:58

21 THE WITNESS: A person of ordinary skill in
22 the art who was familiar with the C++ program
23 language would not look at what is shown there and
24 say that is an instruction. That would not be what
25 a person of ordinary skill in the art would do.

1 And that seems to be at the heart of Dr. K's
2 confusion in this whole analysis. He doesn't seem
3 to be -- he doesn't seem to be exhibiting the
4 characteristics of a person of skill in the art to
5 understand what terms mean in the context of 01:40:26
6 programming and network systems.

7 BY MR. JAFFE:

8 Q Okay. Are you aware of any example of the
9 instruction that is generated -- that's described in
10 Claim 12, what that would look like? 01:41:00

11 A So I think the -- I think that there's an
12 example of what that instruction would be in
13 Dependent Claim 13 and Dependent Claim 14.

14 Q So I'm asking about Claim 12. So if you want
15 to refer to Claim 13 and 14, that's fine. So I'm 01:41:34
16 just going to right -- right now, what data format
17 would the example instruction you have in mind be
18 in?

19 A What data format?

20 Q Correct. 01:41:53

21 A I mean, there's a number of different data
22 formats that could be used. There could be -- when
23 you say "data formats," I assume that you're talking
24 about the instruction that is transmitted?

25 Q The instruction that is transmitted. 01:42:07

```
1      A    So that could be formatted using something
2      like JSON, J-S-O-N.
```

3 Q So it's formatted in JSON. What would be an
4 example implementation of that instruction, the
5 instruction in Claim 12 that is transmitted? 01:42:32

```
6      A    An example?  It could be based on something
7  like a restful web service.  That would be one
8  example.
```

9	Q Okay. And what would -- what would the	
10	message or instruction be?	01:42:52

11 A It would be one or more messages. As we said
12 before, it didn't have to be limited to one message.
13 An instruction could involve several messages.

14 The message could indicate the operation that
15 the instruction was to perform or operations the 01:43:17
16 instruction was to perform. Because an instruction
17 could actually do several operations. It could
18 include -- depending, again, on what kind of
19 instruction it was, for example, if you look at
20 Claim 13, it says that the instruction is going to 01:43:34
21 provide the data that identifies the next one or
22 more media items in a given playback device.

23 So that would be potentially information that
24 could be included or not, depending on how things
25 were implemented. There could be all kinds of 01:43:50

1 different pieces of information that could be
2 included in a JSON formatted message in order to
3 perform the instruction behavior that is disclosed
4 in that claim element where the instruction will
5 configure the given playback device to do certain 01:44:07
6 things.

7 So there's many ways to do it. Again, JSON
8 would be one way to do it. You could do it with,
9 say, XML, another way to encode it. That could be a
10 format that could be used. It could be encoded in 01:44:24
11 the -- some kind of binary representation, like the
12 common binary operation representation, CBOR, or the
13 common data representation, CDR, or the external
14 data representation, XDR. There are different ways
15 an instruction could be encoded in order to 01:44:46
16 communicate the information from, in this case, look
17 likes a computing device to something that will
18 perform the steps that are disclosed, or cause them
19 to occur at some point.

20 Q Thank you for that. 01:45:00

21 So what does the instruction say?

22 A Well, again, what the instruction -- I'm not
23 sure when you say "instruction say." Help me
24 understand what you mean by "say".

25 Q Well, I'm just trying to understand -- you 01:45:13

1 mentioned a lot of things there, and I'm trying to
2 understand an example of an instruction that you
3 think would meet your proposed interpretation of the
4 instruction that is transmitted and instruction that
5 comprises an instruction. 01:45:31

6 MR. SULLIVAN: Object to the form of the
7 question. Outside the scope of claim construction.
8 Incomplete hypothetical and a couple of other --

9 THE WITNESS: So, again, are we talking about
10 the instruction or are we talking about the 01:45:46
11 instruction that comprises the instruction? Which
12 one of these do you want me to focus on?

13 BY MR. JAFFE:

14 Q Well, let's start with the instruction. Can
15 you give me an example of what that instruction 01:45:55
16 would say that would satisfy Claims 1 and 12?

17 A So I think as we --

18 MR. SULLIVAN: Again, let me just object to
19 the question. I think again we're getting into
20 grounds of potential infringement rather than claim 01:46:07
21 construction.

22 THE WITNESS: At a high level, from the point
23 of view of claim construction, the instruction would
24 need to be able to do what is disclosed in that
25 claim. And it would simply have to use a format 01:46:21

1 that could -- it would need to be in a format that
2 would cause the -- at least one given playback
3 device take over responsibility for the playback of
4 the remote playback queue from the computing device.

5 And that is what the instruction would need to do. 01:46:43

6 It would have to contain information in some
7 format -- and there's various formats it could
8 use -- that would cause that to happen.

9 I think from the point of view of claim
10 construction, a person of ordinary skill in the art 01:46:54
11 would know that that is the behavior that the
12 instruction has to evoke, for lack of a better term.

13 And keep in mind that the instruction simply
14 configures at least one given playback device to do
15 several things. It doesn't necessarily do them. It 01:47:11
16 just has to configure it to do those things.

17 BY MR. JAFFE:

18 Q The instruction has to configure them, right?

19 A Well, as the claim says, "Wherein the
20 instruction configures the at least one given 01:47:23
21 playback device to," and then it lists three things
22 it needs to configure to.

23 Q Right. So that is describing what the
24 instruction includes, right?

25 A No. No, not necessarily. 01:47:43

1 Q So that is not describing what the
2 instruction includes?

3 MR. SULLIVAN: Object to the form of the
4 question. Asked and answered.

5 THE WITNESS: What the claim element is 01:47:51
6 saying here is that the instruction is intended so
7 that at least one given playback device will take
8 responsibility for the playback of the remote
9 playback queue from a computing device, and then it
10 goes further to say the instruction configures the 01:48:11
11 at least one given playback device to, and then it
12 goes on and says some things the playback device
13 will do. But it doesn't say that the instruction
14 has to do those things. It says it has to configure
15 the device so that those things can occur. 01:48:25

16 BY MR. JAFFE:

17 Q When you say "configure the device so those
18 things can occur," what do you mean by that?

19 A The word "configure" means to initialize or
20 to enact or to enable. 01:48:37

21 Q So if a message is sent over and the playback
22 device does something, you know, two hours later,
23 you would say that it's configured, the instruction
24 configures it?

25 A I'm not sure that that is relevant in the 01:48:57

1 context of how these devices work, but what it is
2 saying here is that the instruction -- the
3 instruction configures the at least one given
4 playback device to. So it's basically ensuring that
5 that can take place. When it may take place, that 01:49:13
6 is a somewhat different issue. The claim is not
7 saying when that takes place.

8 Obviously if you wanted to play a song on a
9 different playback and it took two hours to make
10 that happen, that might or might not correspond with 01:49:28
11 with what the claim says, but it might not be a good
12 implementation.

13 But I don't think -- that was not what my
14 analysis was looking at. My analysis was looking at
15 does the word -- actually, what I was looking at was 01:49:42
16 responding to Dr. K's argument that the phrase
17 "instruction comprises an instruction" was
18 indefinite. That's really what I was looking at.

19 And so I think I've given a number of
20 examples of how that term "comprises an instruction" 01:49:58
21 is simply providing additional specific
22 characteristics about the characteristics of that
23 instruction.

24 Q Can a single instruction include another
25 instruction? 01:50:15

1 MR. SULLIVAN: Objection. Asked and
2 answered.

3 THE WITNESS: Again, I think we've gone over
4 that before. My analysis of this phrase and whether
5 it's definite or indefinite didn't look into that. 01:50:28
6 I would have to look more into the specification and
7 the claims and the prosecution history to see if
8 that is even discussed.

9 But for the purposes of my analysis here, the
10 instruction comprises an instruction simply is 01:50:46
11 elaborating or providing additional information
12 about what that means, what the -- what the first
13 use of instruction in the independent claim is then
14 being clarified or elaborated or made more specific
15 by the following dependent claims. 01:51:06

16 BY MR. JAFFE:

17 Q So looking back at Claim 1 of the '033
18 patent, we've talked about this at some length.
19 There's a reference to transmitting an instruction
20 that we talked about, correct? 01:51:21

21 A The claim element says:

22 "Based on receiving the user
23 input transmitting an instruction."

24 Q So what device is transmitting the
25 instruction? 01:51:46

1 A I'm not sure it is -- well, it says, "based
2 on receiving the user input." So what is receiving
3 the user input in this case would be the computing
4 device would receive that. And it would certainly
5 seem that one embodiment would be that the computing 01:52:36
6 device would transmit the instruction.

7 But I would have to do more analysis. My
8 analysis of this was not specifically focused on
9 whether only the computing device could do it or
10 whether some other part of the system could do it. 01:53:00
11 But it certainly seems like at least one plausible
12 embodiment would be that when the computing device
13 receives user input, then it will transmit the
14 instruction, thereby ensuring that the playback
15 device can take responsibility for playback of the 01:53:17
16 remote playback queue from the computing device.

17 Q Who receives the instruction?

18 A Again, I haven't done the analysis to do
19 that. I'd have to spend more time and look into
20 that. I was focusing on rebutting Dr. K's 01:53:36
21 contention that the phrase "instruction comprises an
22 instruction" was indefinite. I haven't done the
23 other analysis.

24 Q Okay. So the instruction transmitted --
25 you've read this couple times. It -- I'll just read 01:54:06

1 it.

2 "Transmitting an instruction for
3 the at least one given playback device
4 to take over responsibility for
5 playback of the remote playback queue 01:54:15
6 from the computing device."

7 And then it goes on from there.

8 Do you see that?

9 A I do.

10 Q Do you understand what I just read from the 01:54:22
11 claim of the '033 patent?

12 A Yes.

13 Q Okay. What is your understanding of what a
14 remote playback queue is?

15 A It's my understanding that that would be 01:54:35
16 something that would be -- well, actually, I think
17 it would be something that can be used to
18 synchronized.

19 Let me look more -- let me look at it here in
20 the spec before I start speculating. 01:54:52

21 Q For the record, you're looking at the
22 specification of the '033 patent?

23 A That is correct.

24 So I think this is described in Column 17
25 starting around line 8 and going to line 16 or so. 01:57:30

1 I really haven't analyzed remote playback queue in
2 detail, so -- but it's my understanding that the
3 remote playback queue is -- resides in the cloud and
4 then I believe the discussion that describes an
5 embodiment appears in that portion of Column 17. 01:57:57

6 But, like I said, I haven't really gone into
7 detail. I didn't analyze that as part of my -- part
8 of my scope. But I think that's where it is
9 described.

10 I think there's also a picture, which we 01:58:08
11 talked about earlier, I think it's Figure 7, and I
12 think Figure 7 also demonstrates various elements --
13 let me get to that.

14 Figure 7 -- looking at Figure 7 in the spec
15 to the '033 patent, I think it's the same with the 01:58:31
16 '615 patent, there's cloud and audio content and
17 also this other thing called Sonos. And it's my
18 understanding that the remote playback queue exists
19 somewhere in that element, those elements.

20 But, like I said, I haven't really analyzed 01:58:50
21 the patent in detail with respect to that particular
22 portion. That was just my understanding from
23 reading it.

24 Q What is your understanding of what a playback
25 queue is? 01:59:02

1 A A playback queue is essentially a container
2 that can hold items, media items such as a URL to a
3 song. It could hold a playlist. It could hold an
4 album. And these are things that could be played
5 back. It's a queue of -- it's a queue of multimedia 01:59:24
6 content of various forms. Again, either individual
7 songs or playlists or any type of album or whatnot
8 that could be -- that will be queued to playback at
9 some point.

10 I think a person of ordinary skill in the art 01:59:50
11 at time of the invention would understand what a
12 queue would mean in the context of music, multimedia
13 music systems.

14 Q Does the word "queue" -- strike that.

15 Is it possible to play music without a queue? 02:00:16

16 A Sure.

17 Q How would you do that?

18 A Are you asking in general?

19 Q Yes.

20 A You take your record player from the 1970s 02:00:31
21 and put a record on it and put the needle on the
22 record and the music starts to play.

23 Q What about here in -- let's set ourselves in
24 2011. Could I play music on a computer without a
25 queue? 02:00:50

1 A Sure.

2 Q How would you do that?

3 A You could have one file that's located on
4 your hard disk and you could go and play that file.

5 MR. JAFFE: Pass the witness. 02:02:08

6 MR. SULLIVAN: Okay. Sorry. I had trouble
7 finding the mute button with all these windows open
8 here.

9 I need a short break. Doug, I'm not sure
10 it's anything that you need to get off the screen 02:02:35
11 for or anything else like that, but I just need a
12 couple minutes, one, to relieve myself, but also
13 just to check my notes and see if there's anything I
14 want to ask the witness.

15 Can we take a quick five? 02:02:51

16 MR. JAFFE: Sure.

17 THE VIDEOGRAPHER: Off the record at
18 4:02 p.m.

19 (Recess.)

20 THE VIDEOGRAPHER: On the record at 4:08 p.m. 02:08:00

21 MR. SULLIVAN: I have no questions for the
22 witness.

23 MR. JAFFE: Thank you very much, Dr. Schmidt,
24 for your time. I really appreciate it.

25 THE WITNESS: Thank you. 02:08:16

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1 MR. SULLIVAN: Thanks to everybody. I really
2 appreciate it. Have a nice weekend, everyone.

3 THE VIDEOGRAPHER: We're off the record at
4 4:08 p.m.

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1
2 I, DOUGLAS CRAIG SCHMIDT, do hereby declare under
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4 transcript; that I have made any corrections as
5 appear noted, in ink, initialed by me, or attached
6 hereto; that my testimony as contained herein, as
7 corrected, is true and correct.

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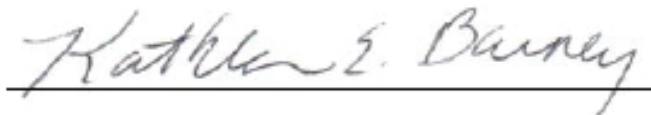
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2
3 I, the undersigned, a Certified Shorthand
4 Reporter of the State of California, do hereby
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6 That the foregoing proceedings were taken
7 before me at the time and place herein set forth;
8 that any witnesses in the foregoing proceedings,
9 prior to testifying, were placed under oath; that a
10 record of the proceedings was made by me using
11 machine shorthand which was thereafter transcribed
12 under my direction; further, that the foregoing is
13 an accurate transcription thereof.

14 I further certify that I am neither
15 financially interested in the action nor a relative
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17 IN WITNESS WHEREOF, I have this date
18 subscribed my name.

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20 Dated: June 28, 2021

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25 CSR No. 5698